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STREAMCRAFT

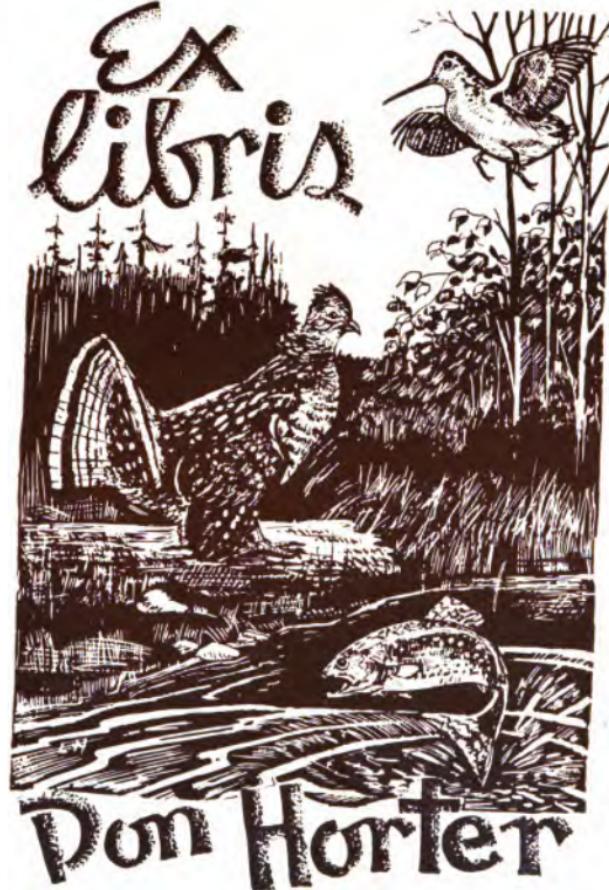
AN ANGLING MANUAL

DR. GEORGE PARKER HOLDEN

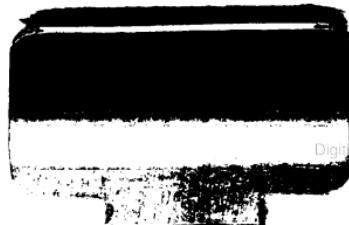


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THE BEAUTIFUL NEVERSINK



STREAMCRAFT

AN ANGLING MANUAL

BY

GEO. PARKER HOLDEN, M.D., F.A.C.S.

*Profusely Illustrated
Including Eight Color-Plates*

The angler, only, is brought close, face to face with the flower and bird and insect life of the rich river-banks, the only part of the landscape where the hand of man has never interfered. —CHARLES KINGSLEY



CINCINNATI
STEWART & KIDD COMPANY
1919

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THIS LITTLE BOOK
IS ADMIRINGLY AND RESPECTFULLY
DEDICATED TO
AMERICA's MOST-BELOVED FISHERMAN
REV. HENRY VAN DYKE, D.D., LL.D., D.C.L. (OXON.)
DISTINGUISHED DIVINE, AUTHOR, SPEAKER, AND
SERVANT OF HIS COUNTRY;
FORMERLY MINISTER OF THE BRICK PRESBYTERIAN CHURCH,
NEW YORK CITY; LATER PROFESSOR AT PRINCETON UNIVERSITY,
AND UNITED STATES AMBASSADOR TO THE NETHERLANDS;
CHAPLAIN LIEUTENANT-COMMANDER, U. S. N.
CHEVALIER OF THE FRENCH LEGION OF HONOR
—BUT MOST OF WHICH HE LEAVES BEHIND
WHEN HE GOES FISHING

v

M842702

Why not be frank and say it without fear?
Of all our poets none I better like,
In certain moods and seasons, than van Dyke,
Whose mellow Bird-Songs make the birds more dear.

Song-sparrow, veery, whippoorwill—who else
Interprets them with sympathy more keen?
Who deeper into real bird-life has seen,
Or of their haunting music better tells?

Nor poet only. Deft with essay, tale,
And sketch (wherein the angler's art has place),
In all he writes we find peculiar grace,
A temper kind, and faith that does not fail.

Who owns the Mountains he has taught us plain;
The charm of Talkability is his;
Life, to his mind, a well-aimed Arrow is;
And Builders strive and labor not in vain.

With him we've sat where Friendship's Fire has burned;
There of far lakes and forests he has told;
We by dear Little Rivers' banks have strolled,
And of the mystic Yarrow Lily learned.

What wonder that we love this gentle friend?
Be his choice books our comrades to the end!

A. EMERSON PALMER

Preface

WHAT the novitiate angler at the stream-side particularly desires to be informed about is how to care for his rod, line, and reel; how properly to rig his rod and arrange his cast; how best to select his lure and to use it; how to describe the artificial fly which he has seen or has used successfully; how to identify at least the most prevalent natural insects along and on the water; and how to dress the artificials in imitation thereof. The construction of the split-bamboo rod—which naturally would include directions for all rod renovation and repairs—itself requires a book, hence we reserve this for separate consideration.

Perhaps the time is not far distant when, as a wise conservation measure, the opening of the troutng season at least will be greatly advanced and—except to childhood, whose irrefragable rights should not be violated—fly-fishing only will be allowed in most waters for the “spangled aristocrat of the hurrying stream.”

Because, then, it is with just these things an

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angler most "wants to know" that this little book deals, we have called it "Streamcraft"—a streamside manual. So far as we are aware, some of this information is not elsewhere available, and the whole of it certainly not in this compact, pocket form; and that is why the author and the publishers believe it will prove of value to the numerous brotherhood of American fresh-water fishermen. The basis of what appears in the ensuing chapters was presented first in the *Forest and Stream* magazine. While of necessity comprising data correlated from many sources, these are always authoritative, duly accredited whenever possible, and most all of it is personally known by the writer to have been verified in practise.

If it be so, that there is no truer benefactor of a nation than he who makes any real contribution to the happiness of its people, then if we shall succeed in smoothing the way for the beginner in this most classical, delightful, wholesome, and accessible recreation of which these pages treat, we should be abundantly repaid for our labor; in any event we thus may partially repay our indebtedness, extending through the years, for the generous hospitality and emanating wisdom of all those genial souls encountered

PREFACE

here and there, at country hostelry and by the waterside—enthusiastic anglers all and many with heads silvered by remorseless Time. Of most recent memory is the delightful Scot, D—, Glasgow born, a retired Canadian lumberman, and loyal American withal. As we sympathetically viewed from the bank the strained efforts of a city sportsman new to his occupation, he whispered over our shoulder: “He wur-rks too much with his ar-rum; eh, Dochter!”

’T is he who vouches for the tale of the Philadelphia angler’s initial troutng experience on the Neversink last Summer, with salt-water tackle, and *blood-worm for bait, while dragging it behind him in the water*. Suddenly he surmised he had hooked a log, but flung out on the bank a *four-pound trout*—his solitary trophy of the trip. Returning home at night, he innocently inquired of the other fishermen, gathered on the veranda, if that was the “average size of the fish in these waters”!

His also the story of the fat man from New Brunswick—he weighed 250 pounds—whom he found sitting on a rock in the shade, placidly smoking and nonchalantly fishing for suckers, one of which he hooked ever and anon and cast

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it back into the deep, and who called D——'s attention to a fine large trout rising in a nearby pool.

- “I’ve been watching him for an hour; he’s all of seventeen inches; cast in there and you will get him,” quoth the mentor; which D—— did—and got him.

Then he inquired of the amiable and portly one: “Why didn’t you cast for him yourself?”

Now, what was the answer?—Just this: “Well, I’m pretty well fed up on trout; and it’s kind er warm; and I’m kind er tired; I’m fishin’ fer suckers today.”

Angling in America unquestionably is having a rapidly-increasing growth in popularity and particularly since the introduction of the casting of artificial bait with the short rod, of the dry fly, and of nature books; and it barely is possible that any matter-of-fact individuals who by chance may be inveigled into perusal of these modest lucubrations, may not leave them without some glimmer of light shed on the mystery of how it is that “just fishin’ ” can worthily stir the emotions and claim the interest of the most exalted intellects.

As a natural reaction when the present solemnly, fatefully, and sublimely glorious times for

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our country have passed, doubtless the reposeful appeal of the gentle sport that lures one to the fastnesses of the quiet woodland and into the presence of musical waters will be more widely and strongly felt than ever. It surely is one of Dr. van Dyke's "peaceful things that will abide for all the world after we have won this war against war." Nor can one always be thinking of war's horrors, even in their immediate presence, and hence Secretary Lansing and Viscount Grey go fishing without shocking any sensible persons; even the soldiers behind the battle-line in France thus seek solace in the intervals of action, as do innumerable convalescent wounded in the waters of the royal Windsor Great Park in London, which have been thrown open to them. The human mind demands and welcomes respite and well that it is so fashioned, else sanity would depart from all of us. I know the truth of this though there are loved ones in Constantinople from whom no word has been received in many months, and amongst those valiantly serving Over There is "Chubby," who only last Summer accompanied me upon his first real fishing and camping trip. How the dear boy was entranced with the whole affair! And who shall explain how it was, on the second morning he

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ever had handled a fly-rod, that he should catch five nice trout to my two little ones—and I having selected his flies? On the third day he assuredly had arrived, requesting with a grin: "Say, let a fellow have some *dry* ones;" and thereafter devoted himself to their use. I hear him now, some hundred yards upstream, halloing: "Oh, Uncle George! Uncle George! I've got one! a good one! come quick!"—he has no net—and I see the bowed vibrating rod and the beaming intent face of him who holds it, as I labor against the current to his assistance.

Acknowledgment is due to Captain James P. Trotter, M. C., U. S. A.—he's a royal fishing pal and a pretty caster—for valuable assistance heartily rendered in the preparation of many of the illustrations.

YONKERS, N. Y., *Spring, 1918.*

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Selection, Care, and Rigging of the Rod

THE TROUT-STREAM

There is a spot where plumpy pines
O'erhang the sylvan banks of Otter;
Where woodchucks build among the vines
That bend above the crystal water.

And there the blue-jay makes her nest,
In thickest shade of water beeches;
A fish-hawk, statuesque in rest,
Keeps guard o'er glassy pools and reaches.

"T is there the deer come down to drink,
From laurel brakes and wooded ridges;
The trout, beneath the sedgy brink,
Are sharp on ship-wrecked flies and midges.

GEORGE W. SEARS ("NESSMUK")

From "Forest Runes," by courtesy of Forest and Stream Publishing Co.

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I

Selection, Care, and Rigging of the Rod



REALLY fine fishing-rod—the most beautiful of all sporting implements—is much too good to hazard in the hands of the novitiate angler on the stream, and yet we would advise that he equip himself with one made of split bamboo. Any tackle-house of repute can supply him, at a cost of from five to eight dollars, with such a rod, about nine feet long, well adapted to his needs. Free of the fear of accidental injury to an expensive article the beginner will make greater progress; and when he has learned to cast very fairly with this rod he will note a surprising improvement immediately he has a better one in his hands. When he has learned to know a good rod when he handles and uses it, has learned how to treat such a rod, and just what style of rod will suit his individual wants, then it is time enough for

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him to acquire the best that his means will allow, whether it be an American Thomas or Leonard, an English Hardy or Ogden, or of some less eminent make but perhaps fully as satisfactory and trustworthy. However, as for dry-fly work you want a rod of not less than nine and one-half feet, and with considerable backbone—either what the dealers call a dry-fly rod or a “tournament” model (they are similar but not identical)—and as this also is the best for all-round fishing, it generally will be found advisable now to select such, especially if the angler can afford only one high-grade rod. It need not weigh over five and one-half ounces and seven had better be the maximum. Avoid a rod having ferrules pinned to the wood—they are an abomination; and get one with plain suction ferrules—no “lock-fastening” device or speared butt.

The American tubular metal rod, made of tempered rolled sheet steel, has been more lavishly and extensively advertised than any other single piece of tackle. It is very convenient, very durable, useful, and satisfactory—in its own legitimate sphere; and the experienced angler—already perfectly familiar with the action of the real thing in a “split-bamboo”—often chooses wisely a steel rod of moderate cost for all-round knockabout use or for an extra to lend to a friend who is new to the sport, especially

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for either bait-fishing or the casting of the wooden minnow and other lures of that class. But we would not want a novice to begin his fly-casting lessons equipped with a steel fly-rod, nor have we ever met with a veteran rodster who preferred this style for fishing with the fly.

While the split-bamboo rod is a wonderful instrument capable of withstanding marvelous strains, and will serve you efficiently during years of repeated strenuous use *if properly cared for*, the best of the kind that was ever put up may be irreparably damaged by carelessness or rank abuse. Surely such an enduring companion is worthy of all proper respect and consideration. The writer has a five-ounce rod of his own manufacture, made over fifteen years ago and in use nearly every season since then, which today is in perfect condition; and he expects it to be the same fifteen years hence.

Never leave your rod lying on the ground for any length of time, and never leave it in the bottom of a boat, an invitation for it to be stepped on. Above all do not leave it lying out over-night, or standing up against a tree or the side of the tent in camp. Do not leave it out over-night at all—take it indoors; and keep it out of the water when fishing. After use, carefully straighten out any joints that may have become bent from unusual stress, dry it with a

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soft cloth, and apply a little thin oil, like "Three-in-One," both to rod and the steel guides. Never put it away in a damp bag. When the rod is disjointed even the individual joints should not stand on end and lean against a support. And when assembled and it is resting horizontally, see to it that its support is equally and well distributed throughout its entire length.

While the rod is unused for a long time, as during the Winter months, the very best method of storage is to joint up the rod and hang it by its tip; and whether a little warped or simply to keep it true it is a good plan to attach a weight—a flatiron for instance—to the butt. If space for this procedure be not available, hang up at least the jointed top- and middle-joints in this way; or suspend each individual joint from its end. And they should be hung in a place neither too damp nor too dry. A continuous exposure to dampness will warp any rod, and an excessively dry atmosphere will so shrink the wood as to loosen the ferrules.

Rods kept on grooved forms or so transported should not have the retaining-tapes tied too tightly around the joints. You can achieve a very serviceable and inexpensive carrying-case by means of a piece of ordinary galvanized leader pipe painted with green enamel. A wooden plug supplies the bottom and you can make a cap of sole-leather for the other end (or

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resort to the harness-maker) and attach a leather handle at the middle.

If there is a very pronounced set or warp in any of the joints, the hanging treatment alone is not effective; before applying it over-correct the defective joint by bending it strongly in the opposite direction at the points needing treatment, between little wooden pegs thrust into holes in a board, or between partly-driven wire nails the sides of which are padded with a good thickness of cardboard. Leave it thus for a time, but do not neglect to inspect it occasionally. Another method is to secure the larger end of the joint between the jaws of your vise, so that the joint will extend horizontally in front of your workbench, and attach a light weight to the unsupported end, and so leave it for a season. This by the way is a handy method of making accurate comparisons as to the relative rigidity of joints or of rods, by measuring the extent of the vertical deflection produced by a definite weight. Or you may support the warped joint at both ends, in such a manner as will prevent its turning on its axis, and hang a weight from the middle. For the very worst cases of "the bends" the only way is to remove wrappings, mountings, and varnish and then to remedy the condition after carefully heating the wood over a lamp or gas flame.

Rods are often set by the strain of playing

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and holding an extra big fish, though in the aggregate most of them are required to do much more work in luring than in landing the quarry. The use of the Wells detachable grip or handgrasp is a very important factor in preserving rods from set, permitting, as it does, intermittent change in the direction of chief strain throughout the day's, week's, or season's casting and fishing. Another advantage of the independent handle is that the permanent grasp will interfere with bunching the joints of a number of rods when packing them for transportation. The slender tops especially are liable to become bent where the handle prevents these joints from lying snugly alongside of butt-joints.

Any loosened windings or ferrules or chipped or cut places in the varnish should receive prompt attention; and after a season of long-continued and frequent use the whole rod should have a light rubbing-down with rotten-stone and water and then receive a thin new coat of the best quality of spar varnish. Wood ashes or powdered chalk mixed with linseed oil, Sapolio, or Dutch Cleanser will clean up tarnished German-silver ferrules or other metal parts; but you don't want them too bright.

A rod that is too limber or "whippy" to suit the taste of its owner may be stiffened materially by judicious amputation at the end of

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the joints; a half-inch to an inch removed from one or more joint-ends will make a great difference in the action. The best place to operate at first is at the small end of the middle-joint and large end of the top. In many instances the small end of the butt does not need attention, and the butt end of the middle-joint should never be touched.

To repair a smashed joint (it generally is the top), cut and file the broken ends to a bevel at least an inch long; glue, wind solid with silk, and varnish. If practicable place a guide at the splice. An emergency repair may be made by splicing the fracture with birch-bark or a split reed from the streamside, and adhesive tape may be used for the binding.

To prevent the joints of your rod from sticking together at the ferrules so tightly as to make it difficult to disjoint them after use, lubricate the male or inner ferrule before assembly with a little mutton-tallow or vaseline. Or you can make use of some of your own natural oil by wiping the center ferrule against the hair at the back of your head; you should have some left there, but if absolutely bald you may resort to the side of your nose. Despite such precaution, if the joints persist in sticking after some unusually protracted period of the rod's assembly, and after a judicious degree of force has not availed to separate them, then try

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again after heating the female or outer ferrule gently and only at the offending point and then *allowing it to cool*; for this you may use a candle or even a match-flame. In disjointing rods, do so preferably with a straight, steady pull—don't jerk; and—especially if a slight twisting strain is employed, at all—be sure that each hand has hold upon the *ferrule-ends*—that neither grasps the wood near the connecting joint. Before resorting to the heating process you can avail yourself of the assistance of a friend, who grasps your hands when they have thus been placed; then you pull together.

The remedy for the contrary condition of loose-fitting ferrules is the application of beeswax to the center ferrule.

In open country carry the rod, balanced, with butt ahead, but never carry an assembled rod any great distance through the woods; take it down even if you do not unstring it. In carrying a short distance through the woods or brush, wind the line spirally about the rod, hook the fly to a reel-band, and reel up the line taut. Have the rod pointing straight ahead of you, getting it through the openings tip first, the butt and yourself following. Similarly, in climbing a fence or crawling under, put the rod ahead.

Rigging the Rod.—To properly string a three-joint rod, proceed as follows: Pick up the butt-

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joint with handgrasp and seat the reel so that it will come underneath the rod, with handle to the right, when the line-guides are also down, and so that the line will render from the lower side of the reel-spool straight to the first or bottom guide. Draw from the reel about fifteen feet of line, and lay down the butt-joint. Next joint the top- to the middle-joint; thread the line through the remaining guides; and then—and not till then—joint the combined smaller joints to the butt. When taking down the rod you generally may reverse the process, yet discretion sometimes prompts one first to disjoint the top—when cramped for free space about the rod-tip. Attach leader and flies.

For fastening the line to the loop at the end of the leader we prefer the simple jam-knot reinforced by a knot in the end of the line, as shown in Fig. 1.

It is a secure fix and yet the leader is readily detached. Fig. 2 shows another method, which makes it safe without the knot in the end of the



Fig. 1



Fig. 2

reel-line and also has the advantage that the projecting end points toward the fly. Fig. 3

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illustrates yet another good way. With some the stevedore knot is the choice; and occa-

sionally an angler will be encountered who whips a gut loop to the end of his reel-line, or who prefers to fasten line to leader by the

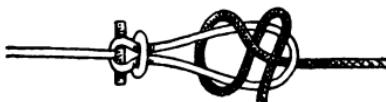


Fig. 3



Stevedore knot

single fisherman's-knot (see Fig. 21), cheerfully sacrificing a bit of line now and then for the sake of having leader and line practically continuous. Again, you may whip a loop with fine silk in the end of the reel-line itself, and then varnish it.

The reel should be seated below the hand on a rod used for fly-fishing. A single-action reel generally is preferred for fresh-water fishing except when casting from the reel. Among such reels we regard the "Expert" and the "Feather-light," made by Meisselbach, as offering splendid value for their cost. They would be still better if provided with a guard to keep an enameled line away from the rather sharp edges, and we understand that the makers are contemplating this improvement. You can round the edge with a fine file where the line draws when pull-

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ing it from the spool with the left hand. The click on these reels is somewhat weak but the firm repairs all of its reels very promptly and free of charge. A later pattern from the same people, called the "Rainbow," almost entirely obviates the above criticism; it is a very fair copy of a superb English model and a beautiful reel for its price of five dollars. Frost and Company, 90 Chambers Street, New York, make a very satisfactory inexpensive reel, the "Frostco," which has a sliding friction-minimizing guide attached.

It cannot be denied that our British brethren make exquisite single-action reels, but they are very expensive and not at all essential to satisfactory sport. They excel also in minute artificial flies and in lines for fly-fishing; but nothing really beats the very best of American rods and multiplying-reels. (Mr. Perry D. Frazer, one-time angling editor of *Forest and Stream*, manufactures a tapered dry-fly line, marketed under the name of "Pioneer," that experienced anglers who have used the best of the imported article think most highly of.) When you read about "winches" in an English or Scotch tackle cat-



Approved narrow-barrel type
of single-action reel

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alog they are talking about reels; the Britisher also is likely to call his fishhooks "irons." Some reels are heavy enough for winches but the American reels mentioned are wonderfully light yet very strong—in fact they are too light, in the estimation of some undoubted experts, who, no matter how "fairy-like" the rod, prefer the balance and consequently less fatiguing action obtained by use of a reel that weighs approximately one and one-half times the weight of the rod. Thus they would have a four-ounce rod carry a six-ounce reel. Mr. Southard speaks quite convincingly about this in his sumptuous and very reliable *Trout Fly-Fishing in America*. "R. L. M. (California)", a contributor to *Forest and Stream*, suggests lead wire wound around the inside of the reel-drum as a good remedy for increasing the weight of a light reel; or a piece of sheet lead could be rolled about the axis of the spool. At the same time he very well cautions that a too whippy rod is made worse by a heavy reel.

Reels should be kept properly cleaned and oiled, and you must beware of resting the butt of your rod on sand at any time, as grit will work havoc with both reel and line. If sand does inadvertently find entrance remove the spool from the frame and clean it out at once.

Leaders, and Preparation of the Cast.—This brings us to the consideration of the leader itself and the preparation of the cast—"cast" denot-

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ing the leader and its attached flies as well as the act of throwing out the line. Silkworm-gut is the standard material for the leader (or casting-line, as distinguished from the reel-line), and it is advantageous in every way to buy this by the quantity in strands and to tie your own leaders. This material is not the silkworm's entrails—any more than "catgut" is feline intestine (it is sheep gut)—but it is the unspun silk which ordinarily would go into the building of the cocoon. When the creatures are ready to spin they are torn apart and the silk-sacs, held by the ends, are drawn out to the length they will stand and the resultant strands are dried in the air. These strands come in various thicknesses, of different lengths, and in widely varying quality. The best gut is imported from Spain and is selected both for uniformity in size and to be uniformly round and not flattened. The natural color is usually a bluish-yellow translucent white, the best having no yellowish tinge and being clear and wiry. That stained a "mist" or bluish-gray color generally is preferred as being the least visible in the water. You can stain the natural to a color approximating this by immersion for a time in a good ink, such as Arnold's, Carter's or Stafford's writing fluid, clear or diluted. First wipe it with alcohol, then soak thoroughly in water and wipe dry, before dyeing. Some

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like the brownish-yellow tinge imparted by soaking the gut in a decoction of tea and red onion leaves.

Malcolm A. Shipley says that "The famous mist color for leaders and gut is made as follows: Into an enameled boiler that will hold one pint, place as much best quality chip log-wood as will go into a teaspoon; fill the boiler with water and let it come to a boil. Allow it to boil for ten minutes, take it off the fire and place in it as much sulphate of iron as you can hold on a ten-cent piece and stir it until dissolved. Now place the gut in the liquor one and one-half minutes, then if not dark enough insert it again, and allow to stay until it has the desired shade. I have used this recipe for years and have never found it injurious to the gut in any way."

The three most useful sizes of gut for trout and bass fishing are what is known to the trade as First Padron, Regular, and Refina, the first being the heaviest of the three. Smaller sizes than the Refina are called "drawn" gut; they are 2x, 3x, and 4x. These are strands which in the natural state have been submitted to a planing process by drawing them through definitely-gauged holes in a metal cutting-plate, which of course weakens the gut.

Stored gut should be kept from moisture and light, and it is recommended to enclose it in

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chamois. All leaders should be aired and dried thoroughly before putting them away. After constant soaking in a soak-box during a fishing trip of some days the quality begins to deteriorate. (Some anglers utilize the top of their wool socks, which are drawn over the waders to prevent their chafing in the wading-shoe, for a soak-box.) In the *dry state* silkworm-gut is brittle, and it must be understood that before tying any knots in this material it must be made perfectly pliable by thorough soaking in water. Warm (don't use hot) water softens it quicker, and a teaspoonful of glycerine to the pint may be added, though not essential.

About the longest strands of natural gut that can be bought are eighteen to twenty inches, and the cost mounts up very rapidly with the increase in length. The advantage of long lengths is fewer knots in your leader, hence "lower visibility."¹ Recently there have come into the market gut substitutes in the form of knotless leaders. The best of these to be had in America is the product handled here by Joe Welsh of Pasadena, Cal. (In New York they are now stocked by the Abercrombie and Fitch Company.) It is the original "Telerana Nova" leader introduced by William Robertson of

¹ See a series of three most interesting articles, begun in the November, 1917, *Forest and Stream*, by Edwin T. Whiffen, on cultivating your own silkworm-gut at home, from an American silkworm, the large green caterpillar of the common rusty brown (*Cecropia*) moth. Knotless leaders from six to nine feet long are thus obtainable.

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Glasgow, Scotland, and though apparently very similar to the article known as the Japanese invisible fiber fishing-lines, about which more or less has appeared in the outdoor magazines during the past few years, it has been stated that it is a genuine silkworm product and not of vegetable origin, and that the secret of the long uniform lengths obtained is that of blending the silk-sacs of a number of worms before the gut is drawn out. But it does not appear to be identical with standard gut. It is more flexible, is very durable, and an improvement over silkworm-gut because of its dead, lusterless character, gut having a glassy surface which refracts light. And about the only drawback seems to be the tendency for a cut end to fray and thus embarrass one in threading it through the eye of the hook. A friend tells me that burning the end is a remedy. Telerana Nova leaders are obtainable in uniform lengths of three, six, and nine feet, without knots; the most useful sizes for trout and bass are numbers 3, 4, and 5, which test to ten, seven, and four pounds breaking strength respectively. They should be dried on the stretch before putting away after use.

The arrangements shown in Figures 1, 2, and 3, for attaching the reel-line to the leader, are likewise applicable for the attachment of a dropper-fly straight snell to a dropper-loop in

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the leader. While not more than two flies for lake fishing and only one for the stream or any dry-fly work is preferable, there are many good anglers who like to fish with three flies on the cast when fishing with wet flies. One objection to multiple flies is well illustrated in the predicament of an angler who through hooking a two-pound chub on his stretcher-fly risked the loss of the three-pound trout at the same time fast to the hand-fly. Flies should be fastened to the leader about forty inches apart. The bottom dropper- or bobber-fly, next the reel-line (also called hand-fly), should have the longer snell or connecting piece of gut which suspends the fly; and it should be the larger or largest fly, as the cast will alight better when the end fly—stretcher-, tail- or point-fly—is a small one. The middle dropper-fly snell may be four or five inches long when tied.

There are numerous plans for attachment of a dropper-fly. Do not tie any dropper-fly loops in your leader after the manner shown in Fig. 4, because this method does not give a direct pull and therefore one strand of gut is likely to cut another (A). This form of loop tends also to hang parallel with the leader, thus favoring the fly's fouling—snell's winding

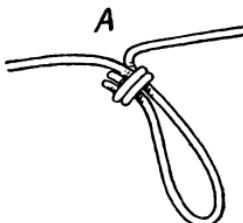
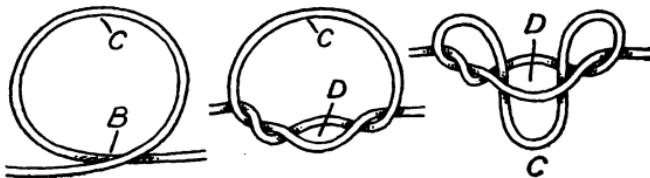


Fig. 4

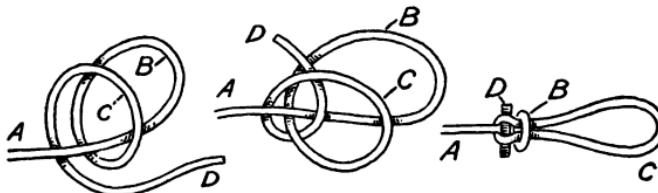
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around—the leader instead of standing out free of it. These objections are obviated by the arrangement illustrated in Figures 5, 6, and 7. Make a simple loop in leader (Fig. 5), roll the gut at B between thumb and finger (Fig. 6), and next invert the loop C through the strands at D (Fig. 7).



Figures 5, 6, and 7

Neither should the loop in the end of the leader for the attachment of the line be constructed in the faulty way noted above. The best way is that shown in Figures 8, 9, and 10.

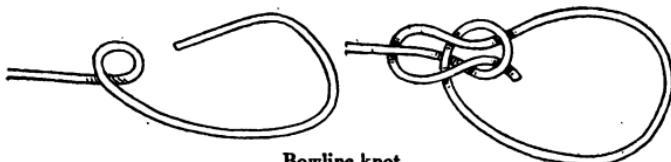


Figures 8, 9, and 10

A double loop (B and C) is made in the gut A, as seen in Fig. 8; next pass the D end of gut between these loops (Fig. 9); then pull loop C

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through loop B (Fig. 10). Not a few anglers resort to the reliable bowline knot.



Bowline knot

Junctions between loop and loop unquestionably are the most convenient arrangement of any, but many experts do not like any kind of looped connections—multiple loops least of all—because they enmesh air bubbles which make the cast too conspicuous and scare off the fish. Such would regard the methods noted above (Figures 1, 2, and 3), of connecting a straight, loopless gut snell with a leader loop, as a compromise. Another such compromise is the simple trick of hanging the looped snell of a dropper-fly against a knot in the leader, shown in Fig. 11. Arrangements more favored by the particular angler are shown in Figures 12 and 13, and in Figures 14 and 15, by either of which two plans the dropper-fly snell is securely attached to the leader without employing any permanent loops. Referring now to Fig. 14, when traction is made at A and B the slip noose is pulled tight, upsets

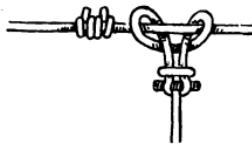
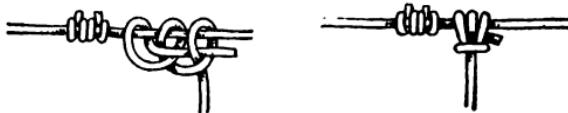


Fig. 11

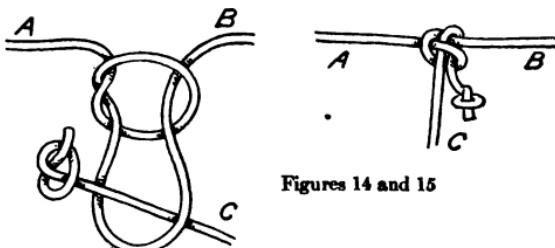
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itself, and turns the end of the snell over that is caught within it (Fig. 15).



Figures 12 and 13

The snell of a fly should be of the same thickness as that of the part of the leader to which it is attached; if it is much lighter in weight this favors the fouling of the snell around the leader.



Figures 14 and 15

Some anglers like to make up a *number of complete casts* for wet-fly fishing, each carrying either two or three flies, and to change the whole cast, leader and all, instead of changing individual flies. In making up such permanent casts a neat stunt is to form the dropper snells from extended portions of the strands of the leader itself, when tying up the leader.

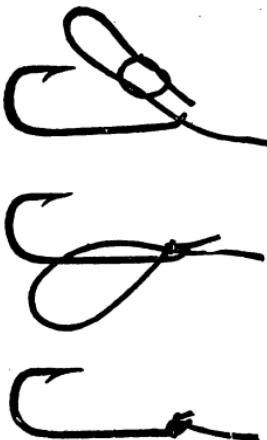
Because the snell of any well-made fly will become weakened at its point of attachment to

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the fly before the fly itself will be unfit for use, eyed flies are preferred to snelled flies by the majority of experienced anglers. For securing the hook end of a dropper-fly snell to an eyed fly or the end of the leader to the stretcher-fly, Major Turle's knot is reliable. Figures 16, 17, and 18 clearly illustrate the maneuver as applied to a bare hook. The only objection is that in passing the fly itself through the loop (Fig. 17) it is liable to get mussed up. This may be obviated by employing the simple jam-knot (like Fig. 1, showing attachment of line to leader, but minus the knot in end), but as this is of dubious security here we prefer the very nice figure-of-eight device. This knot

is formed as shown in Fig. 19, the loop A is then slipped over the eye of the hook and the whole drawn taut from the side B (Fig. 20).

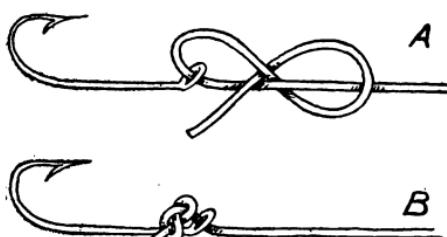
Leaders for fly-fishing generally are made either six or nine feet in length, and tapered, using at least three sizes of gut. For bait-fishing, a level leader from one to three feet long will meet the requirements. The fineness of a



Figures 16, 17, and 18.
Major Turle's knot

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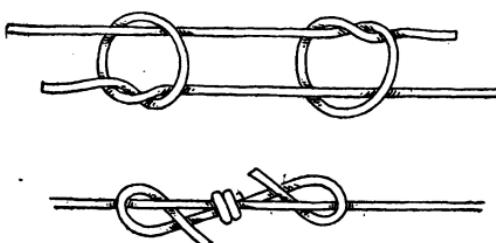
fly leader will be governed largely by the sizes of flies that you are to fish with; Refina gut usually is fine enough for the terminal lengths.



Figures 19 and 20

For fastening the strands together the single fisherman's knot is simple and neat. The detail is shown in Fig. 21. The ends passed

twice around the main strands make the double fisherman's-knot. After both knots have been pulled tight, pull them up close against each other and cut off the surplus ends. These ends may be cut closer with safety if first turned in



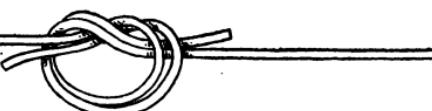
Figures 21 and 22. Single fisherman's-knot

by an additional hitch, as seen in Fig. 22. It will readily be understood that if one of these turned-in or

turned-back ends is left sufficiently long it may serve as the *snell for a dropper-fly*. This is the "snell stunt" that we referred to in a previous paragraph. Another and a very easy

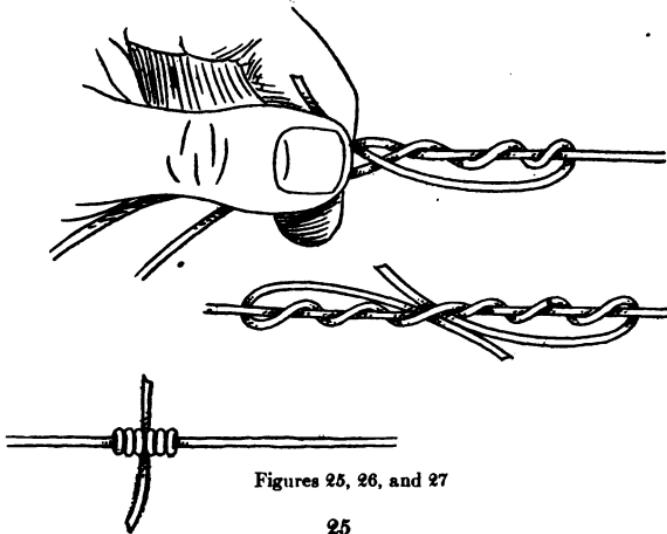
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way of connecting leader strands is by lapping the lengths and then making a simple knot (single water-knot) which includes both, as in Figures 23 and 24. By passing the strands twice through the loop



Figures 23 and 24. Single water-knot

the double water-knot is formed. Yet another excellent method is one noted recently by Mr. A. H. Chaytor of England, in *Forest and Stream*, the details of which are made sufficiently explicit by the illustrations, Figures 25, 26, and 27.



Figures 25, 26, and 27

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After leaders are tied up they should be soaked again, then stretched between pins or brads and so dried, after which they may be rolled into large coils and put away till used.

When making or repairing casts and changing flies on the stream, a most useful article is a pair of tiny blunt-pointed scissors that may be carried in the shirt pocket. Have them secured by a cord.

Hook and Fly Sizes.—The most useful sizes of artificial flies for trout fishing are numbers 10, 12, and 14—the 12 in most brands being the best for all-round use—according to the American system of indicating hook sizes. Larger



No. 10



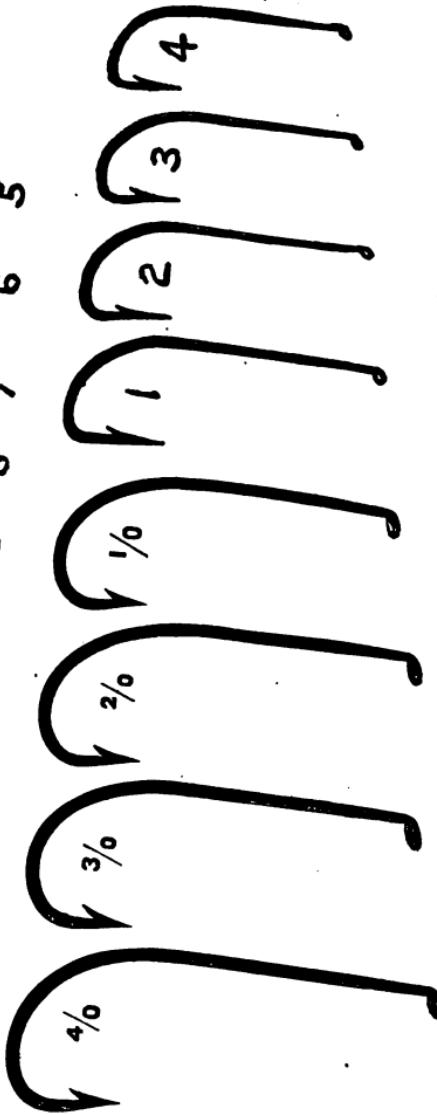
No. 12



No. 14

flies than these are used late in the evening, for large trout, for bass, and for salmon. Confusion arises from the fact that the modern British system of "new numbers" denominates the smallest midge fly as 000, the two next larger being 00 and 0. Then follow numbers 1, 2, 3, etc., the larger numbers denoting the larger flies. By the prevalent American plan—old numbers—the smallest size, corresponding to

Hook and fly sizes and numbers



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the British 000, is numbered 17; 16 is the next larger size, as the flies grow larger the numbers getting smaller. The corresponding English new sizes for the numbers 10, 12, and 14 flies that we illustrate are numbers 5, 3, and 1 respectively. (Number 14 pictures a dry fly.) In the plate showing the sizes of hooks, numbers 5 and 6—the larger of the series of smaller hooks—are Limerick bend, while the others are Sneck bend; all of this series are down-eyed, upturned-shank Pennells.

When it comes to larger hooks, used principally for salmon flies and for bait-fishing for bass, pickerel, and pike, the sizes and numbers run as indicated in the series of the larger hooks shown. Numbers 1, 2, 3, and 4 picture down-eyed Pennell Limericks; numbers 1/0 to 4/0 are Sproat hooks. The number 2 Sproat is a very popular hook for bass. We will reserve discussion of further hook details for the chapter on "The Angler's Flies."

This reference to the subject of flies calls to mind a specimen of the curious advice sometimes thrust upon the novice by those who would pose as experts, writing in the sportsmen's magazines. Imagine that most dainty and precise result of the fly-tier's art, a dry fly, so carefully fashioned as to its radiating hackle and upstanding wings, carried *pressed flat* between two layers of oiled felt! The suggestion

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of Dr. Harry Gove of New Brunswick is a very different thing from subjecting flies to this continued pressure. Says he, place a few pieces of paraffine wax in a wide-mouthed bottle and add twice the volume of paraffine oil. Place the bottle in hot water, shaking it now and again until the wax and the oil are thoroughly mixed together. Now immerse the flies in it for a few minutes, then take them out and press them gently between two folds of cloth to remove superfluous oil. They will not require another application for a lengthy period.

If you do not possess one of the costly but convenient English aluminum fly boxes, divided into little compartments each with its individual transparent and spring-hinged lid, you can carry eyed artificials loosely in any small commercial hinged tin-box that is not too shallow. This is a very popular method with many of great practical experience. Or you can plait a piece of paper and place this in the box, and stick the flies through the tops of the folds.

Also you may manufacture a more elaborate handy receptacle out of a box that ten cents' worth of crystallized ginger confection comes in from the fancy grocer's, or out of some styles of hinged tin cigaret-boxes. This arrangement, as we will now describe and picture, permits of carrying dry flies without mashing them and in such a way that inspection of and selection

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from the stock is greatly facilitated. Narrow strips of zinc are placed crosswise on a pad made from the felt of an old soft hat, and each is riveted to the box cover by three small brass escutcheon-pins. Another, removable pad which is riveted



Homemade fly-box

to a zinc base-plate, fits easily into the bottom of the box. Place the transverse strips on one pad opposite the spaces between strips on the other, and vary the widths of both strips and spaces for the accommodation of flies of different sizes. Upright pieces of zinc at the ends of the removable section strike the inside of the

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cover and keep the two pads apart when the box is closed. Give the felt occasional doses of turpentine applied by means of a glass medicine dropper; this will keep the box moth proof. (A good general plan for the safe storage of flies is to keep them in a tightly-stoppered wide-mouthed bottle or preserving-jar.) Thrust through a slit in the felt at the right end of the removable pad is a small pair of tweezers such as any drug store supplies. The ear-spoon end was cut off and the shank filed down to make a bodkin for cleaning out obstructed hook-eyes.

Between the removable pad and the box bottom there is abundant room for a number of wet flies, eyed or snelled, in envelopes and for a few extra leaders.

The points of the dry-fly hooks are inserted under the edge of the zinc strips and between them and the felt underneath; they do not penetrate the felt. In placing a fly in position, turn it edgewise, pass it under a strip, and then turn it so that the fly stands erect. Reverse the process in removing the fly.

Even better than the zinc are strips of sheet celluloid or of oiled or shellaced cardboard which are sewn to the felt pad by their lower edges, and their ends caught by a thin leather binding which extends all around the borders of the pad.

The inside of the box may be given an application or two of white enamel paint and the

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outside treated similarly in green, brown, or black.

Lines.—The enameled silk line, because of its greater weight and smoothness which permit it to render freely through the guides, is the regulation line for casting the fly; for understand that in fly-casting it is the weight of the line acted upon by the spring of the rod that carries out the leader and flies, whereas in casting bait it is the weight of the bait that carries out the line. This same line may be used for bait-fishing, but for bait-casting with the short rod either a soft- or hard-braided undressed silk line is the thing. About the best all-round waterproof level line for fly- and bait-fishing that we know of for its price has been on the market for years, and appears to give invariable satisfaction. It is called the "Saline" enameled line, and as it runs large in caliber as compared with some other brands, the size G is a good one for general use, and it costs just one dollar for twenty-five yards. It is of a dark greenish color with fine black mottling, and seems to be pretty generally stocked by tackle-dealers. It is made by Gladding.

These enameled, waterproof lines are made level or of uniform thickness throughout, and also with a single and with a double taper. The best of this product are not simply coated externally but they are what is known as "vacuum-

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dressed;" many successive applications of the waterproof composition of oil and wax are thoroughly worked into the body of the line and it takes months to complete the job. A tapered line will cast both farther and finer. If you feel that you can afford the extra expense have a double-tapered line, that may be changed end for end on the reel after appreciable wear; if not, content yourself with a level line, which will do excellent work. In either case have the gut leader which you attach to the line made up tapered, as already noted, by the use of heavy gut strands at the end joining the line, the other strands gradually decreasing in size toward the end holding the tail-fly. The one condition under which you may achieve better results with the flat (no taper) line and short, heavy, uniform leader is when casting against a stiff wind. Extraordinarily long and fine leaders are sometimes used for the special purpose of casting with the wind—a modified form of the "blow-line" angling popular on Irish lakes and much practised with natural May-flies in the season.

Always unreel and carefully dry out all lines, by free exposure in large loose coils to the air, but not in the hot sun, immediately after use.

The practical angler should know how to splice a broken or cut line; this accident often occurs from stepping on a hanging loop with

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the hobnailed wading-shoe. The knowledge will, too, enable him to make his own tapered lines—not so smooth and fine as those from the tackle-dealer but very serviceable nevertheless—by splicing together different sizes of level-dressed line, which you can obtain in single or multiple twenty-five yard lengths. Tapered lines come singly in lengths of thirty yards or more. Thus you also may make use of the still solid portions of expensive lines that are partially worn out, at the end.

To *splice a line*, first fray out the ends to be united, with a needle or steel pin, carefully separating the strands for about three-fourths of



Line splicing

an inch.
Divide the
strands of
each end
into three

equal parts; cut away not much more than a fourth from each part; overlap the splice as shown in the illustration but do not push the two sections tightly together. When splicing a lighter to a heavier piece of line, cut out fewer strands, if any, from the former. Now twist the whole splice tightly, right hand turning away from you, left toward you. Catch the middle of the splice in your fly vise, or in the corner of a larger vise. Make the winding in two parts, starting each from the middle, and

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twist the half of the splice you are engaged with toward you as you wind away from you. Wind closely with waxed silk thread, 00, 000, or a single strand of size A. End the whipping as directed for the finishing-knot of a fly, in the chapter on fly-tying, by turning the end back and under the last three or four turns. Turn the splice in the vise and treat the other half similarly. Then roll the completed splice against the table under a strip of wood. Apply a coat of shellac if it is desired soon to use the line, otherwise use spar varnish slightly thinned with turpentine; repeat when the splice shows signs of wear.

Of course the angler's ditty-bag will include all the little things needed for these repairs, to tackle, etc., as shellac, winding-silk, small pliers and file, emery-cloth, ferrule cement, a bit of candle, and rubber patches and cement for mending waders.

When not wound on the fishing reel ready for use, lines are best kept on large flat spools—storage or tournament reels—made of soft wood and from five to nine inches in diameter, having a rim about one and one-fourth inches wide into the edge of which an inch-wide groove is cut to the depth of about an inch. They should be varnished to prevent warping and checking. However they split readily enough when dropped, and after the idea of Mr. Perry D. Frazer, William Mills and Son, 21 Park Place,

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New York City, make a series in aluminum, obtainable in sets of two or three which nest one inside another. Storing lines on these large spools prevents the setting in them of the small-coil spirals caused by their remaining all Winter on the fishing reel.

These aluminum spools are not cheap, and the writer has made very inexpensive substitutes from galvanized sheet-iron of the gauge used for stove piping, that serve every purpose for storage use. It is a simple job. Take a strip 23 inches long by 3 inches wide and cut one end as pictured in Fig. 1. Now fold over the edges $\frac{3}{8}$ of an inch. Start the fold by bending the edges in the jaws of a vise and complete with a hammer. For the cutting you must have a tinsmith's heavy shears, and you now make a series of cuts at right angles into the folded edges and beyond to the uniform depth

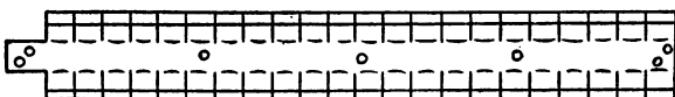


Fig. 1. Making a galvanized sheet-iron storage reel

of $\frac{3}{4}$ of an inch and about the same distance apart. For a large spool like we are making—of $7\frac{1}{2}$ inches inside diameter, and which will easily hold eight to ten enameled lines—a reinforcement along the center with a second strip

SELECTION, CARE, AND RIGGING

of sheet-iron, $\frac{3}{4}$ of an inch wide, is advisable. This should come on the *outside* of the spool when the whole affair is bent into a circle and the ends riveted together with small copper tacks or brass escutcheon-pins, through holes punched by the point of a wire nail. The reinforcing strip also is held in place by a few rivets. Note that it is fastened to the side *opposite to that on which the edges of the wide strip are folded over.*

After you have bent the whole into circular form and fastened it together at the ends, it remains but to bend the edges over to make the groove and the flanges of your spool. This is easily done by shaping with a hammer, over a wooden mold cut to the proper arc and held upright in a vise or nailed on edge to a base-board, and which will look like Fig. 2.

The illustration from the photograph (Fig. 3) shows such a storage reel hanging over the notched horizontal arm of a wooden gallows; and when the line is transferred onto the fishing reel directly from the spool so hung, there will be just enough resistance to the storage reel's turning on the arm to ensure convenient and smooth winding of the line on the fishing reel. Nine lines are carried on the



Fig. 2. Wooden mold for shaping storage-reel flanges

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storage reel of the picture, and the attached tag notes the order in which they are wound on and the special fishing reel from which each was removed.

For a line dressing, to keep enameled lines soft, smooth, and pliable, deer fat is recommended but mutton-tallow will suffice; or you may rub them down with pure linseed oil. Use a soft cloth.



Fig. 8. Homemade storage reel suspended from gallows

There is—or was, not long since—one line on the market, not enameled on the outside but filled solid with a waterproofing material, that if necessity should require it

might be used for all three kinds of fishing: fly-casting, casting with the long bait rod, or for casting directly from the reel. It is the invention of Mr. J. D. Chaffee, and was sold by the Anglers' Supply Company, Utica, N. Y., under the name of "Natchaug Electric" line.

The Art of Casting

THE ANGLER'S CHANT

Ah, the shriek of the reel, the trout-fisher's reel!
 No sound is so sweet to the ear;
The hum of the line, the buzz of the wheel!
 Where the crystalline brook runs so clear.

Here 's a shade on the stream where the willows bend down,
 Where the waters sleep drowsy and dim,
And there where the ripples whirl amber and brown
 The lords of the rivulets swim.

Then fling the light tackle with delicate cast,
 Let your fly like a cobweb alight,
A dash and a splash, and the victim is fast,
 While your reel sings a song of delight.

See, yonder green-moss'd boulder enchecks
 The stress of the turbulent tides,
And there amid bubbles and foam-bell flecks
 The gold-spotted brook-trout hides.

ISAAC MCLELLAN

II

The Art of Casting



T will not now come amiss to summarize what our own experience has emphasized as constituting the most vital points of finished work in the utilization of the rod for one of the chief functions for which it was created—the casting of the line and placing of the lure; the other function being the hooking and playing of the quarry. In fact, fishing does not really begin until the cast has been made; but certainly it will not begin at all if the cast be not made; and just as certainly the better the casting the more will there be of the fishing. We will, then, consider here only the principal points, as the subject has been treated very elaborately and authoritatively by other writers.²

²The author highly regards the following as being among the best and most practical books covering the general subject of angling: *Familiar Fish, their Habits and Capture*, by Eugene McCarthy; *The Book of Fish and Fishing*, by Louis Rhead; *The Fine Art of Fishing and Fishing Kits and Equipment*, both by Samuel G. Camp; *Practical Dry-Fly Fishing*, by Emlyn M. Gill; the *Book of the Black Bass* and *Favorite Fish and Fishing*, both by Dr. James A. Henshall; *Fly-Rods and Fly-Tackle*, by Henry P. Wells; *Favorite Flies and their Histories*, by Mary Orvis Marbury; Malcolm

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It repeatedly has been asserted that "no one may learn casting from books." It is perfectly true that nothing may fill the place of a *good* coach; but let me assure the beginner that *conscientious practise* based upon the hints that we are about to enumerate will be productive of infinitely better results than the most devoted personal instruction of one who has acquired a faulty style. We admit withal—and to our own chagrin—an uncanny excellence of execution attained by a certain few, that is a gift of the gods.

The novice should heed the caution not to attempt at first to get out any great length of line, but to concentrate his efforts upon clean-cut work; and he must learn that a *harmonious balance of line weight and of rod weight or stiffness is absolutely essential to proper and successful casting of the artificial fly*. A heavy line is necessary to bring out the action of a stiffish rod, but the same line will impede or kill the action of a rod that is too light or whippy to handle it. Lines most commonly used are graded from D, the heaviest, through E, F, and G, to H, the lightest of these five sizes. In most cases a five-ounce rod should carry an E enameled line,

A. Shipley's *Dictionary of Flies; Trout Fly-Fishing in America*, by Charles Z. Southard; and *The Salmon Fisher*, by Charles Hallock. To this we might add *The Ouananiche and its Canadian Environment*, by E. T. D. Chambers. For the literary side of the subject the reader is referred to the writings of Dr. van Dyke and to the catalog of books in the chapter on "Fishing in Books," in his *Fisherman's Luck*.

THE ART OF CASTING

whether level or tapered, and anything over six ounces a D line.

Having then provided yourself with a rod equipped with a line the weight of which is suited to that rod's resiliency, you may proceed with some casting practise, on a stretch of short grass or on the snow in lieu of a convenient piece of water, placing a barrel-hoop, newspaper, or square of colored cloth about thirty feet distant for a target. Attached a well-soaked and straightened leader (one that has been dried on the stretch) to the line and put one fly on the end of the leader, having first cut off the point of the hook.

The styles of fly-casting which the angler should at least know about whether or not he becomes familiar with all, are: the overhead or overhand; underhand or side; switch or Spey; loop or grasshopper; wind or steeple; flip or snap; and the dry-fly. Of bait-casting—"spinning," as the English term it—he should know about the ordinary cast, strip-casting, and casting in the Greenwood-Lake style, with the long bait rod; and then he can essay casting from the quadruple-multiplying reel, with the short rod, Kalamazoo style. If upon practical acquaintance with the foregoing his ambition is not yet quenched, he can further try out all these with the *left hand*.

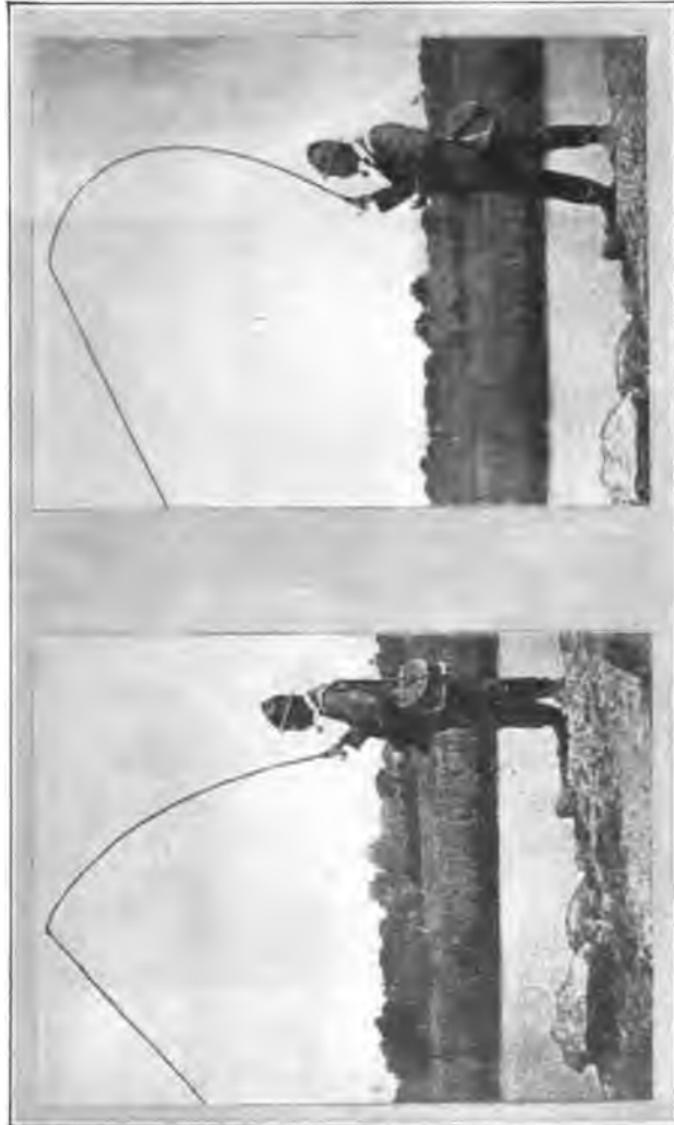
The overhead cast is the parental or funda-

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mental, style of fly-casting, all others being but variations designed to meet special conditions of weather or water or other obstacles. The rod is brought back very little beyond the shoulder and, after a slight pause, line and fly (or flies) are shot out by action chiefly of the forearm and *wrist*, the elbow being close to the body. We have never seen the more important points that should be observed better summarized than by Mr. Samuel G. Camp, in the following words: Remember "to hold the rod with the thumb extended along the upper surface of the hand-grasp; not to carry the rod *too far back* in the back-cast [butt-joint barely beyond the vertical, or back of the ear—remember that the tip is carried back much farther by the pull of the line]; not to delay the back-cast too long, and to start it *forcefully* [mark that]; to start the forward-cast when the line first begins to pull on the rod, and to *start it rather easily* and *finish strongly*; and, finally, not to allow the rod to go too far down toward the water at the end of the forward-cast [it should stop considerably short of horizontal]."

The wrist action is an important factor throughout the whole process; it is emphasized in picking the fly off the water and then blends with the forearm motion in making the back-cast, and it is sharply in evidence at the finish of the forward-cast. In wrist action lies the

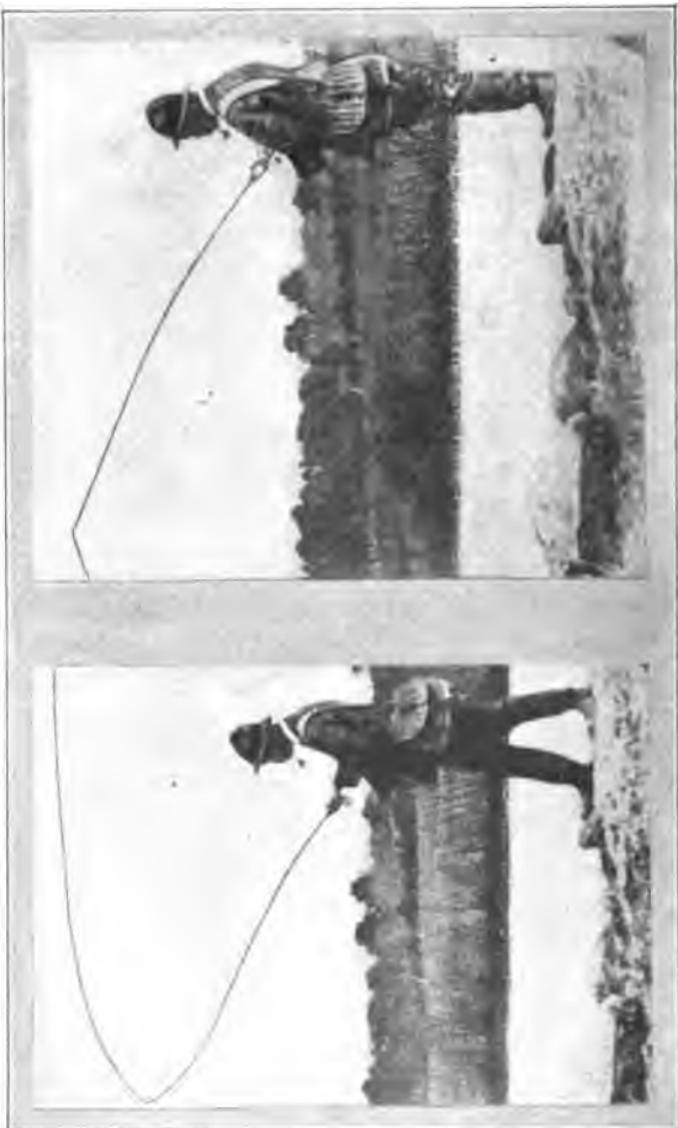
THE OVERHEAD FLY-CAST



No. 1. Starting the back-cast. (End of the
fifth phase.)

No. 2. About as far back of vertical as lower
part of rod should go. (Fly clear of water
and end of line has started backward.)

THE OVERHEAD FLY-CAST



No. 5. Nearing end of forward-cast. (End of line traveling forward. Note double curve in rod.)

No. 4. Cast completed. (Fly just dropping to water.)

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secret of "making the rod do its full work." When once you have caught the knack of utilizing this element to its full value you will note as a revelation with what slight effort and how smoothly the cast is delivered. The *correct timing of the back-cast* and other fine points are acquired instinctively, only by practise. As one lengthens the cast, the back-cast pause must be lengthened correspondingly. A point that helped the writer much is to endeavor to throw the line straight *up in the air* when lifting the fly from the water, instead of *thinking of* throwing it behind you. Too low a back-cast, caused by *carrying the rod too far back over the shoulder*, and the failure to start the back-cast *suddenly* enough are the common errors of the novice. A quick twist of the wrist from left to right, in effecting the back-cast, seems both to facilitate it and minimizes the chance of the line striking the rod or coming back into the rodster's face, especially when it is breezy.

(The accompanying illustrations of the overhead fly-cast are from photos of that veteran angler, the late Lou S. Darling, taken by Edward Cave.)

In a communication to *Forest and Stream*, Warren Coleman writes interestingly of a "previously undescribed movement of the rod in fly-casting." Says he, "In my analysis of the act, the completed cast consists not of three,

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but of four phases: (1) The back-cast; (2) the pause; (3) an *advancement of the whole rod*; and then, (4) the forward-cast.” He claims this third phase to be vital to the proper execution of the cast of moderate distance and longer, and describes the movement as consisting of an “*advance of the whole rod, including the butt, for the purpose of ‘feeling out’ the tension of the line as it swings back, in order to find the exact moment at which the forward-cast should be made.*” It is very well understood that there is such an exact point, when the line is going out behind, at which the forward movement must be begun if one is to achieve a perfect result.

We are inclined to believe that Mr. Coleman’s observation is correct; also that his third phase corresponds to Mr. Camp’s instruction above, to start the forward-cast “rather easily.” Farther, we think that there is yet one more—a fifth (first in order of time)—distinct phase included in the act of casting. This likewise consists in “*feeling out the line,*” but just preceding the back-cast. The rod is drawn in toward the caster to straighten and tauten the line or to bring the fly to the surface preliminary to the quick snap of the wrist which jerks it off the water.

Please note that Mr. Camp defines that “*psychological moment*” when to begin the for-

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ward-cast as the time "when the line first begins to pull on the rod," and *not* when it has *straightened out behind*—the time-honored injunction that one hitherto has invariably encountered. We have taken the pains to emphasize this here because the following paragraph in Mr. Camp's excellent treatise, *The Fine Art of Fishing*, is of especial interest to the present writer since it confirms his own observations of expert fly-casters on the stream, under favoring conditions of light that permitted every inch of the rod and line to be seen; and it is the first time that he has noted such confirmation in print.

"I have suggested," says Mr. Camp, "waiting for the line to straighten out behind the caster in the back-cast, that is before beginning the forward-cast. Instantaneous photographs of expert casters, however, show that in actual practise the line does not entirely straighten out in the rear before the forward-cast is started; that, in fact, there is a considerable loop at the end of the line which *straightens out just after* the caster begins the forward-cast. [See illustration, "Expert dry-fly caster at work." It is from a pencil portrait, by Louis Rhead, of that accomplished angler G. M. L. La Branche. He is shown as having started the forward-cast; note the end of the line.] The theory of this is quite plain. If, when casting a rather long line, you wait until the line becomes quite



EXPERT DRY-FLY CASTER AT WORK

(From original drawing by Louis Rhead)

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straight behind you, you wait just long enough for the line to lose its life. The forward-cast, then, should be started when the line, having passed to the rear of the caster, first begins to *pull appreciably on the rod*. But do not start the forward-cast too quickly, because this is likely to snap off the end fly."

The two-handed style of casting is preferred. We are not now referring to the use of two hands *on the rod*, as in casting with the double-grasp salmon-rod, but to that method in which the caster, taking the line in his left hand between the reel and the first guide, pays out and retrieves it with this hand when casting, fishing the flies, or playing a fish. (See again the picture of Mr. La Branche in action.) In making the fishing cast, the ensuing back-cast, and in striking a fish be sure to hold the left hand rigid, close to the body, or else hook a finger of the rod-hand over the line to hold it firmly. The loop of line, retained between the reel and the bottom guide, should never be too long, else it is liable to become fouled. On the forward-cast the loop, thus under the guidance and control of the left hand, may be shot out through the guides; such shooting of the line not only adding to the length of the cast with little fuss, but flies so delivered will land gently, especially if the line be *retarded ever so slightly* at the last moment before the flies drop. In single-handed

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manipulation of the tackle the same result is accomplished by raising the rod-point a little. Another and more generally known wrinkle of value in aiding this feathery alighting of the flies upon the surface of the water, is to aim at a point a few feet above the water instead of directly at the surface, in making the forward-cast.

Accuracy in casting is developed gradually by making it a point to aim at some definite spot on the water. By constant observation of this practise a complete coöordination of eye, brain, and rod-arm may ultimately be acquired that results in the flies acting in a marvelously obedient fashion.

In making the *side or underhand* cast, the rod travels parallel with the water, in the back-cast, and but little higher than the rodster's waist. The rod-hand is kept low, with its back toward the water, and the line travels only three or four feet above the water. The forward-cast must be started quickly to keep the line out of the water on the back-cast. This cast is very useful under bridges, overhanging branches, or other obstructions.

The *switch or the Spey* casts are resorted to when there is an obstruction behind the angler that prevents the usual back-cast. Many writers consider them identical, but our understanding of the matter is that the flies are not

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lifted from the water preliminary to making the switch cast; they are drawn slowly toward the caster on the surface of the water. After being so moved a short distance, with the rod carried a little to the *right* and back coincidently until it is nearly vertical, and after a pause that allows the flies to *stop moving*, the rod is then brought straight forward and down, which rolls a loop of line out over the water; as the cast is extended the loop enlarges. (Switching the line in this way is sometimes employed to lift the flies off the water preliminary to the regular overhead cast. It obviates the noisier "rip" of the fly and leader through the water, incident to the customary back-cast, when there is a long line out.) Observe that, contrary to the technic of the ordinary cast, the line in the switch cast is *retrieved slowly* and thrown forward quickly. In this cast as sometimes made both hands are brought into use on the rod, the left hand steadyng the butt as a fulcrum.

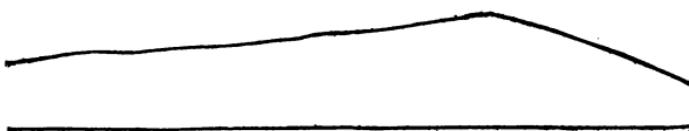
The ensuing description of the cast named from the Scotch river Spey, is Louis Rhead's. I have read at the very least a half-dozen different and altogether diverse ones. "It is necessary to fish downstream. We are looking down the river with a rocky cliff behind us; our rod-point is rather low, pointing toward the fly, and our line is extended downstream. Suppose our rod-point is at A; we raise and withdraw it smartly,

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following the curve shown, to B, when our *line will be off the water*; then we depress it to C again and raise it to D, by which time the fly and a portion of the line will be *touching the water almost at our feet*; then we switch the rod forward sharply from D to E, and the line follows round in a curve, leaves the water and rolls out downstream in front of us. The progress of the rod-point from A to D must be steady and rather quick than slow; but from D to E it can hardly be too quick."

Curve followed by rod-tip in Spey cast

The *loop or "grasshopper"* cast is distinct from the above, and often is unwittingly produced while casting a moderate length of line, when the intent was to straighten out the line in the air, in the forward-cast, before the flies dropped. *The cause of this is bringing the rod too far forward in the forward-cast.* It is intentionally made use of in fishing when casting an unusually long line, to cause the flies to alight



Line extended in air above water and flies dropping wholly by gravity

THE ART OF CASTING

quietly. The line is doubled back behind the leader as it hits the water, the force of the cast sending the leader upward and onward in a slow curve that drops the flies on the water some distance ahead. The caster may aim to have the loop strike some definite object as a rock or log, beyond which it is intended that the flies shall alight.



Line slapping water before flies alight (loop cast)

This is the style of cast also and of necessity employed in *tournament distance casting*, the record being 135 feet or more for a single-handed rod. Special, very heavy lines are used, greased with graphite, and about thirty feet of this distance represents slack line shot out through the guides. It has been demonstrated that the most effective tournament lines are made with a long front taper, a moderately short heavy belly, a quick back taper and with a small level back-line to facilitate shooting the line. In tournament work the line is not carried on the rod on a fishing reel, but is unwound from a large wooden tournament reel that lies on the casting platform near the caster's feet.

The *wind or steeple* cast employs the usual

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back-cast, only the flies are sent as straight up in the air as possible; and the line is then driven forward by a strong outward and downward *chopping* motion, which brings the rod closer to the water than at the finish of the regular overhead cast. Plenty of strength with quick, snappy wrist action is required for successful execution.

The *flip or snap* cast is used with a short line, under overhanging branches where free casting is an impossibility. The hook, at the end of leader and line withdrawn about as long as the rod, is grasped between the left thumb and forefinger. The rod is bowed by drawing taut the line, which when released throws the flies out on the water by the unaided spring of the rod—that is, it does unless the hook unfortunately sinks itself into the careless angler's finger instead. The cast may be lengthened a bit if a little slack line is held by the forefinger of the rod-hand, between the reel and the first guide.

In *casting the dry fly*, a single fly is orthodox, and is so dressed that it will *float upon the surface of the water*. Buoyancy is further promoted by the occasional application of white paraffine oil or ordinary kerosene thereto, and also by greasing the leader and some twenty or thirty feet of the reel-line (with mutton-tallow), so that they will not sink and drag the fly under.

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(Theodore Gordon did not grease his *leader*, but preferred to have this part of his tackle to lie just under the surface.) In addition, several false casts, between the actual fishing casts, are made by switching the fly backward and forward through the air, to keep it dry. If you will carefully watch an expert while he thus is carrying his line in the air, you will note that his back- and forward-casts differ from those movements of the fishing cast in that they are less extended and are uniform and continuous—there is no definite pause; also that he inclines the rod to the right, in making the backward movement, so that the line is less likely to strike the rod. All the while his wrist is working his rod-hand smoothly backward and forward, the hand itself is swinging in a little circle from right to left—opposite to the direction of a clock's hands.

The cast is made up or up and across the stream, and especially over quiet pools and still reaches of water, and the fly is not drawn through or over the water, but is allowed to take its course with the current as it floats naturally upon the surface. If the fly does not alight with its wings standing upright—"cocked"—retrieve it immediately and cast again. The slight retarding of the line by the left hand just before the fly drops, as noted under discussion of the overhead cast, almost invariably *insures*

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too the cocking of the fly, and especially if used in connection with a high forward-cast.

A friend one day was busily preparing to go on the stream. He had dried out his line after the morning's fishing and now was industriously greasing it. Another angler approached the camp from the bank below; he was camping a couple of miles downstream, and it so happened that he was of the theatrical profession and devoted to the wet fly. As he drew within our circle, his eyes riveted upon the industrious one, this member of our party was seen applying the finishing-touches, which consisted in anointing the fly from a small vial, that he just now was returning to his flannel-shirt breast pocket, and "blowing it up," whilst he meanwhile regarded with intent satisfaction the result of his labors. Then burst forth the wandering minstrel's greeting: "For g-a-w-s-h sakes! what do you do for an *encore*?"

The accompanying very interesting illustration from *Recreation* is after a photograph by Mr. George La Branche. It showed an ordinary wet fly and a dry fly on the water, in a white enameled basin. Note the bedraggled appearance of the wet fly as compared with the more natural appearance of the other. (See also another picture, of floating flies on the water, in the chapter on "The Angler's Flies.")

The commonest method of *casting bait with*

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the long rod is by means of a side cast following a preliminary back *swing*. During the back-cast, of whatever character, no attempt is made to keep the heavier baits in the air; they are allowed to rest on the water a moment before being impelled forward, and some slack line having been held in the left hand or laid in coils in the boat, this is taken up through the guides



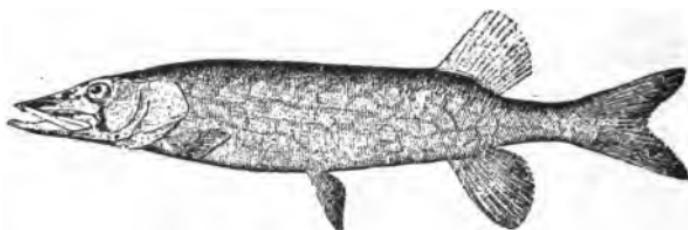
Wet and dry flies on the water

as the bait shoots forward. There are various local modifications of this general technic. An enameled or some other form of waterproof line preferably is used, and it must be flexible and not kinky. In this style of casting it is of even more importance than in fly-casting, that the slack line shall not be inclined to spring into small coils, as enamel-dressed lines are likely to do when they have been left on the fishing reel for a considerable time prior to use. We repeat that a good rubbing-down with mutton-tallow or linseed oil before putting such lines away in large loose coils, and previous to renewed use, will promote flexibility. The long

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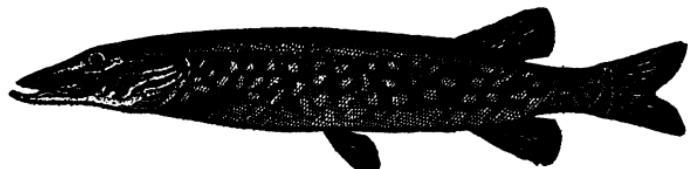
rod may be used with baits of suitable weight for casting directly from the reel, and the lightest baits may be cast like a fly.

In the *strip* cast, the left hand manipulates the line in something of the same manner em-



Pickerel (*Esox reticulatus*)

ployed in two-handed fly-casting. It is especially applicable when fishing from a boat. The reel and line are rigged as for fly-fishing—reel underneath rod and handle to the right. Some-



Pike (*Esox lucius*)

times a short gut leader is used, or one of fine wire if pickerel or pike may be encountered. The heaviest baits are used only with the short bait-casting rod.

Have about six feet of line beyond the rod-tip, and then strip an additional twenty feet

THE ART OF CASTING

or more from the reel and lay it neatly coiled in the bottom of the boat, so the line will not foul during the cast. Carry the rod to the right and a little backward—if preparing to cast from right to left—pointing it slightly in the direction of the water, and then give it a smart swing forward, across the body, and a little upward. Just immediately before the rod points in the direction it is desired to cast, release the hold of the left hand on the line sufficiently to allow it to run out between the fingers, but retain enough control of the line so that it will not feed to the first line-guide faster than it will run through, else a tangle will result. The line is retrieved by stripping it through the guides at moderate speed with the left hand, in a series of short, sharp jerks. During this process always hold the rod-point well down in order to minimize the angular bend of the line, and consequently its friction, at the tip-guide.

The *Greenwood-Lake style* of casting with the long bait rod is one modification of the foregoing. The bait is cast forward as above, some more line stripped from the reel, and part of this additional slack is *taken up in the subsequent back-cast*, wherein the bait is allowed to rest upon the water behind the caster for an instant; then it is brought forward for the final or fishing cast, with the line *pulling taut in the left hand* which grasps it; and as the bait thus

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shoots forward again, as much *more slack* as possible is carried out through the guides, thus considerably increasing the length of the cast. The fishing cast is made with the casting-arm fully extended and with a swing of the whole body from right to left, in the direction that it is intended to land the bait.

A modification of strip-casting is sometimes employed in boat fishing with the *short casting-rod*, but one having the reel below the hand. The rodster generally is seated, and the overhead cast is used exactly as soon to be described, except that instead of casting from and also retrieving the line by means of the multiplying-reel, the line runs out from coils laid in the bottom of the boat and is then retrieved by the left hand, in the short jerks characteristic of all strip casts. The reel may be single-action and the click is on. The line is held until the end of the swing, and subsequently rendered and controlled, between the first and second fingers of the rod-hand.

“*Bait-casting*” has come to be understood to mean the casting of artificial bait directly from the reel and by means of a short rod, as distinguished from casting the lighter natural or artificial baits with a long rod. The method originated in the West and has had a rapid growth in popularity. It is applicable either to lake or stream. The writer well recalls the

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advent of the first exponent of this style of fishing in Ulster County, New York, about the year 1898, and the excitement he caused by the many big bass that he caught in the then novel manner in local lakes. The baits used—generally some of the innumerable varieties of artificial lures, whether wooden minnows or otherwise, and generically designated “plug”—have some of them as many as five gangs of three hooks each! Many if not most—and whether for “topwater” or “underwater” use—carry nine hooks. However we are glad to note that a recent development in this class of baits is a line of miniature wooden minnows carrying only a double or even a single hook and designed for use with the long rod; they are called in the trade “fly-rod wigglers.”

The most insatiable bait-casting addicts are known as “plug fans” or “pluggers.” If the plug fisherman finds himself in the way of attempting to invest in and try out every variety of bass lure that is advertised in the sportsmen’s magazines as a “sure killer,” his path surely will lead either to bankruptcy or to the insane asylum. The following equipment of this class is sufficient: An underwater bait of the wooden-minnow type, say with green back and white belly; a red and white small “Tango” minnow; a surface bait of the revolving-head type, colored white, or yellow with gold spots;

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a "Baby Crab Wiggler;" some large bucktail-flies and an assortment of other interchangeable bass flies of different colors, which can be attached to a small spoon and used with or without pork-rind strips, as noted in the chapter on "Flies." The last, and lighter, baits require weighting in order to cast them with the short rod, and a "coin" sinker placed a little ahead of the fly and against a split-shot serves the purpose nicely. These remarks apply also to the phantom minnow.

The casting itself is as complex as fly-casting and hence quite as productive of pleasure as the satisfactory accomplishment of any bit of involved technic. But however enthusiastic the reader may become over this mode of angling, it is hoped that he will restrict the armament on whatever types of "dreadnaught" or "submarine" he shall particularly affect, to the use of *three single hooks at most* (the legal limit in some waters), or better yet, to one.

The cast is made either by a side or overhead movement. The former is the easier to learn and drops the lure with less splash; the latter is more accurate and with it a longer stretch of water may be covered. Eighty or ninety feet is only a moderate cast for one who is proficient. The standard line for this game is a small hard-braided undressed-silk one, though some prefer the soft-braided finish. A line of twelve pounds

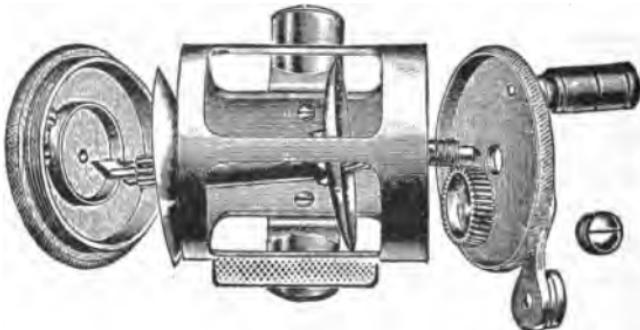
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breaking strength is very popular. The smaller the line, the less friction and weight, consequently the longer the cast that it is possible to make. For tournament work a very light line is used (often the domestic size A sewing silk) and a stronger, short piece—trace—is attached to the one-half or three-quarter ounce casting-weight to take the initial strain. The *reel used is a quadruple-multiplier*—making four turns of the spool to one of the handle—designed for this especial purpose; it has a wide spool. Meek's "Simplex," the "South Bend" anti-backlash, the "Redifor," the "Talbot," Hasting's "Good Luck," the Benjamin "Thumezy," the "Worth," and Meisselbach's "Takapart" and "Tripart" are among the very best of moderate-priced reels of this class. Some are obtainable in free-spool designs, in which the gears are unmched in casting, permitting the spool to revolve while the balanced-handle remains stationary. They also are made to automatically spool the line evenly, and again there are luxurious creations that embody all these various refinements. The "anti-backlash" patterns are a boon for night fishing. The common nondescript cheap reel would not last an hour at this work. Be sure that the *reel click is off* before casting.

It is a good plan to splice the silk casting-line to the end of a cheaper, cotton or linen line—

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such as Cuttyhunk bass line—which serves as a filler on the reel. An ever better device is to fit a cylindrical cork core, about three-quarters of an inch thick, around the axis of the reel-spool. A quart whisky-bottle cork, split lengthwise, may be fastened in place with shellac or



Quadruple-multiplying reel (quick take-down pattern)

marine glue; it serves the purpose nicely as it is of one size throughout and of an appropriate diameter.

In making the *overhead* cast the bait is reeled up to within a foot of the rod's tip. The rod—not over six feet long, and five being the most popular—is first held at arm's length, pointing in the direction of the contemplated cast, with reel uppermost and thumb holding the line tight against the top side of the spool; then it is raised by gradually bending the elbow straight back over the shoulder as far as you can com-

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fortably reach; though in distance casting rod and arm are carried back more to the side of and away from the body, as pictured. Also



Position of arm and hand at beginning of a long overhead cast

in making long casts, the body bends backward, the weight being on the right foot, which is behind. (In tournament *fly-casting* the right foot is advanced, for a right-handed caster, and as the body sways in making the back-cast the toe is raised but the heel remains planted.) In tournament work some raise the left foot from the ground and have the left hand extended and raised, like a shotputter's. The forward-cast is started with a smooth, deliberate, half-pushing motion that should be steadily ac-



At end of overhead cast. Note reel position

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celerated, and finished with a strong, sharp forward and inward turn of the wrist, so that the line runs from the reel with the latter *on end, in the position of handlebar uppermost*. So held, the spool will spin most freely. The body is poised on the left foot, in front, at the end of the forward-cast, and in distance efforts the right may then be off the ground. In casting for accuracy, many right-handed casters place the right foot foremost.

Until the moment of releasing the line—which is just about as the rod-tip is above the caster's head—and permitting the momentum imparted to the plug to carry the line out through the guides, the thumb of the rod-hand is kept firmly pressed against the spool of the reel. The thumb's pressure is then lessened slightly but not wholly removed, a continuous gentle pressure being necessary to prevent the reel from over-running—running faster than the line is running out through the guides—and causing a backlash and its accompanying snarl.

As with fly-casting, better results are attained when actually fishing, by deliberation and a considerable wrist action which permit the spring of the rod to supply much of the impetus. With more force and speed put into the effort increased thumb pressure becomes necessary, which, in turn, retards the line. Yet a full-arm swing is required with a stiff rod.

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It is important that the bait be *not permitted to lie dead on the water* even for an instant, therefore it is started back by a drawing movement of the rod which begins even before the bait strikes the water; coincident with this the caster is passing the rod to his left hand, which grasps it just in advance of the reel and partly encloses it between the second, third, and fourth fingers and the palm, while its thumb and forefinger guide the line from side to side so that it will spool evenly on the reel, the cranking of which has already been started with the right hand.

It makes a sight of difference whether the line *is* let go at exactly the right moment; a too tardy release will result in the bait's striking the water at the feet of the caster. The even winding of the line on the spool in reeling in is a very important factor of smooth, successful casting; without due attention thereto a backlash is a foregone conclusion. The great knack of the whole business is in this and in learning so to "thumb the reel" that its speed is at all times properly adjusted to that of the outrunning line. Backlashes are less liable to occur in casting from a full reel. Keep the rod-point low when reeling, to reduce friction at the tip-guide. Some believe in reeling in the bait very slowly; others in rapid movement or in mixing it up. Of course this cast at once recalls the act of the

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small boy in throwing green apples from a pointed stick.

In making the *underhand or side* cast, the rod is held below the waist-line, is swung rearward at arm's length, and then forward and slightly upward with a steady, sweeping movement, to the point where the released line will shoot the bait in the desired direction. The other details remain the same.

Trout Habits; Lures and their Use, Including Some Stream Entomology

AN ANGLER'S WISH IN TOWN

When tulips bloom in Union Square,
And timid breaths of vernal air
Are wandering down the dusty town
Like children lost in *Vanity Fair*;

* * *

Then weary is the street parade,
And weary books, and weary trade;
I 'm only wishing to go a-fishing;
For this the month of May was made.

I guess the pussy-willows now
Are creeping out on every bough
Along the brook; and robins look
For early worms behind the plough.

* * *

And best of all, through twilight's calm
The hermit-thrush repeats his psalm:
How much I 'm wishing to go a-fishing
In days so sweet with music's balm!

'T is not a proud desire of mine;
I ask for nothing superfine;
No heavy-weight, no salmon great,
To break the record or my line:

Only an idle little stream,
Whose amber waters softly gleam,
Where I may wade in woodland shade,
And cast the fly, and loaf, and dream:

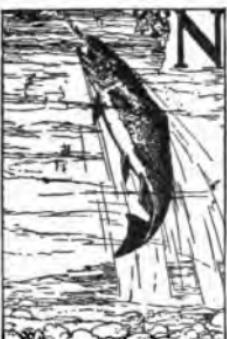
Only a trout or two to dart
From foaming pools, and try my art:
No more I 'm wishing—old-fashioned fishing
And just a day on Nature's heart.

HENRY VAN DYKE

*From "Poems of Henry van Dyke," by kind permission of
Charles Scribner's Sons*

III

Trout Habits; Lures and their Use, Including Some Stream Entomology



O matter how expert a theorist one may be upon the subject of how to catch trout, yet he is not entitled to be called an expert *angler* unless he "delivers the goods," or, as Charles Zibeon Southard trenchantly remarks, unless he consistently catches fish in all kinds of waters and under all conditions. There are some who do this, a vast majority of whom, be it observed, have never been afflicted with the *morbus scribendi*. Theodore Gordon was one notable exception. (This at once relegates the present writer to the doubtful class, and thus having cleared his conscience he will blithely proceed.) And yet certain it is that these real experts have some very definite ideas to guide them, and a résumé of their lore upon this fascinating topic should be of interest to the tyro, and also of practical value to him *when sufficiently combined with actual stream experience*.

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First of all, these men are generally after fish, thus seek to present any legitimate bait that is wanted, and consequently are unalterably wedded to no one style of lure; though often preferring some particular method provided that it is successful under the prevailing conditions. (It is coming to be true of more and more anglers that no other method will interest them for a minute when dry-fly fishing is *available*. A friend tells me that he contemplates putting in considerable time "scouting along the brook armed with a pair of *field-glasses*," during the next season's campaign.)

At the Beginning of the Open Season.—A prime factor in the appeal that trout makes to the angler is that the quarry, whose name is a perfect synonym for gameness, is the wariest fish that swims. In early April—until the young maple leaves are half out, as Nessmuk says—natural bait will be found more successful than the artificial fly. (The expression "live bait" is restricted to bait-fish by most anglers.) Trout are then lying quietly along shore, at medium depth, and avoid the swift water. The best way to take them is with well-cleaned angle-worms or with white grubs, the latter being Nessmuk's preference. From toward the latter part of May—"apple-blossom time"—till pretty well along in July, and sometimes even right up to the beginning of the close season, is the

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fly-fisherman's Elysian period. Most success then is generally had from the rapids or riffles, or just at the foot of rifts; though the largest trout are oftenest caught in pools—"holes" of whatever size—at any time, the "whoppers" monopolizing the deepest and coolest places; but there may be a pair, male and female, "at home" in one choice spot.

Upon occasion large trout will go foraging at night, chasing minnows up into the shallows. As the sun becomes hotter the fish again take to the deeper pools and to spring-holes or pools at the junction of some inflowing smaller and colder stream.

We recently enjoyed the opportunity of studying an amusing demonstration of trout traits. A small spring feeder brook, which joined the main stream just below camp served as our refrigerator and drinking supply. We had partially dammed this at one point and deepened the hole above. Where it cut in under the bank, near a projecting small rock, a baby trout about two inches long had settled himself. (Young fish are called "fry" until they attain a length of several inches, when they are "fingerlings.") Whenever a pail of water was dipped, upstream he would dart for some ten feet, only to return to his original position shortly after things had quieted down. When upon occasion a still smaller troutlet would come too near his

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preempted abode, the first would dart at him savagely and butt him away. "Little Jimmy" could be found at this exact spot at any time during the two weeks we were in camp. "Big Jim," who lived near a large rock in the main stream a little above camp—ah! that is another story, and not yet concluded we trust.

Natural Bait, its Collection and Cultivation.—Natural bait also is more successful when the water is fouled (roily) after a heavy rain, especially worms—sometimes grasshoppers—and used with a sinker. The best method of cleansing or scouring, angle-worms (facetiously, "garden hackles") is to keep them in moss in an earthen-ware crock or flower-pot, in a cool place. The best moss is that having long roots, and such may be found on rocks where water is trickling through it. Large slabs of this may be peeled off the rocks, so cohesive is it. It should then be thoroughly washed and wrung out in water before receiving the worms. A teaspoonful of milk may be spread over it occasionally and a little sprinkling of water. Every few days remove any dead worms. In a week or less the worms have become toughened and very clear, almost transparent from having lost their earth. An English correspondent of *Forest and Stream* says that for fifteen years he has used in lieu of moss, a wad of dampened—*old lace curtain!* He dents a hollow in the top into which he de-

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posites his freshly-dug worms, which cleanse themselves beautifully in their passage through the coarse mesh of the fabric. First wash out all the starch from the lace, then squeeze up tight, loosen up by shaking, and then place in a waterproof worm-bag.

When carrying worms to and at the water don't put them in a box and dump dirt on top of them; put in the soil first, worms on top and let them find their own way into it.

Worms may be bred in a worm-box, which should be at least three or four feet square and of nearly the same depth. In one corner of the bottom cut a small hole for a drain and cover this with a double thickness of wire mosquito-screen tacked firmly in place. Sink the box where it will not receive the full direct force of the sun's rays, but a touch of sunshine at sometime during the day is beneficial. The side of a barn is a good place, where the earth is damp; but it must have suitable protection from the rain so as not to become water-soaked. Sink the box two-thirds of its depth. Put in about six inches of good garden loam and then a couple of good-sized pieces of sod. Continue with alternate layers of loam and sod till the box is nearly filled, with loam at the top.

The best time to collect your worms is after a rain. Select only the liveliest, healthiest looking ones, and of course unmutilated. About an

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ordinary tin-canful will be enough to put in the box. About every two weeks replace the old sod and loam with fresh. The best feed for the worms, says "R. P. L."—who notes all these interesting details in a letter to *Forest and Stream*—is coffee-grounds mixed with corn-meal. (There was another detail, a most delicious one, concerning *male and female* worms, that Mr. Li— no! we will say no more; we forbear because of his many good works.) When feeding, dig little wells here and there into the earth and place in them some of the mixture. The worms will learn to find the places in short order. They should be fed once a day, and a couple of fistfuls is enough for a feeding. To "call up" the worms dash a couple of dippers of water on the surface; and this should be done once in a while to keep the earth moist. You can start this breeder in the Spring, or not later than June, and a couple of these boxes will supply an abundance of worms even in August, when they are as scarce as hen's teeth.

Other forms of natural bait, for fresh-water fish generally, include minnows and other small fish, crawfish, hellgramites, the pupæ of the dragon-fly, shrimp, snails, grasshoppers, crickets, June-bugs and other beetles, small frogs, field-mice, bluebottle-flies or a few similar, abundant species of other large land flies having two flat

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wings, and their larvæ (maggots), some of the larger water flies, as May-flies or drakes, also the stone-flies and their larvæ, salmon eggs, fish eyes (pectoral fins are used for artificial "flies"), meat (pork-rind also is used not as a natural bait, but to simulate a minnow), and vegetables. (A strip cut from a larger fish's side and white belly, near the tail and including a portion thereof, or the "throat-latch" of a pickerel, make good casting substitutes for the minnow.) Nessmuk's white grubs doubtless were the large ones found often in rotting stumps and logs, or dug from the soil.

Minnows and worms usually are fished downstream or across and down, with or without a shot sinker, and allowed to run with the current; unless bottom-fishing in still water, when a sizable sinker is used and perhaps a float or bobber. Worms are tucked on the hook by catching the point just underneath the skin at several places and leaving quite a bit of both ends to wriggle. This is the available method of fishing in small brooks or parts of a stream that run through a tangled overgrowth of vegetation which prevents casting. The bait is worked with the aid of the current into all the likely nooks and crannies, which often hide surprisingly good fish that remain unmolested for the most part because of their inaccessibility to the less venturesome and persistent anglers.

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The smallest frogs are used and hooked through both lips, same as a minnow, unless still-fishing, when the latter may be hooked crosswise amidships, just underneath the dorsal fin, but not so deeply as seriously to injure it. Remember that the cardinal rule in still-fishing for bass with the minnow, to await the second run before striking, does not apply to similar angling for trout, which if you are to succeed in hooking them, must be given but little time. The bass grabs the minnow, makes a preliminary run with it, pauses to swallow the bait, and then is off again on his way, but the trouts exhibit no such methodical deliberation. Small grasshoppers are best, and the hook is inserted under the collar-joint just back of the head, and thrust through the length of the body to the tail, or else crosswise through the shoulders; crickets similarly. Or these fragile insects may be tied to the hook with fine thread, and we think that Mr. Froggie, if used at all, is also thus best fastened around the waist to the hook. Frogs are a late-season bait.

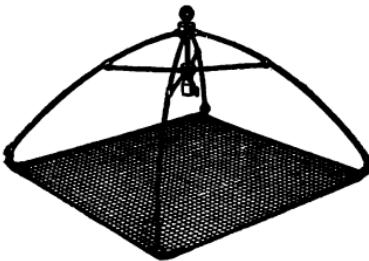
Crickets are found under stones, especially flat ones, after mid-August when the nights begin to get cool, and particularly on hills having a Western exposure, and they may be fed on pieces of peeled apple or on sliced tomato while in captivity. Make a cricket cage out of a cigar-box by cutting a window in the cover and screen-

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ing it with wire mosquito-net. A little screw-eye turned across a slot in the edge makes a handy lock. At one end of the box cut a hole about an inch in diameter and close this door with a cork secured by a string.

Minnows may be caught on the minutest of hooks, attached to a line of common black sewing-thread, and baited with small bits of worm, or a little ball of flour-dough mixed with absorbent cotton to hold it together. Minnow seines and "umbrella" nets also are used. Best of all is a minnow trap — collapsible or telescopic for portability — sunk in mid-water in a shallow spot, near or under the bank, and baited with bread crumbs.

A trap of the general style of the one pictured may be constructed in a few minutes from galvanized wire netting, of not larger mesh than



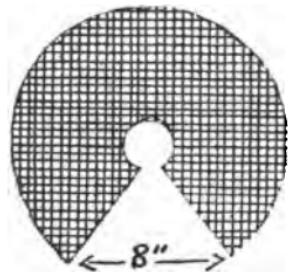
Umbrella minnow net, open and folded



Wire minnow trap

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quarter-inch. You transport it in the flat and set it up simply by lacing the edges together with wire or cord. The main piece measures 20 by 31 inches; this makes a cylinder 20 inches long by about 10 inches in diameter. The funnel end in the flat, is of the shape shown, having a $6\frac{1}{2}$ -inch radius and a 2-inch hole. The other end may be a circular piece of 10 inches in diameter. Anchor with a stone attached to the bottom by a short piece of heavy cord; and a small wooden buoy secured to the upper side may mark its location. Point the



Making a portable minnow trap.
Pattern for funnel end

funnel end downstream.

For lake use you may make it with a funnel entrance at each end. To remove your catch partly unlace at the end.

Upon occasion minnows may be scooped up by sweeping through a school with a fine-meshed landing-net, most successfully in the shallows at night, by aid of a flashlight; or they may be captured singly by stunning them by hitting with another, good-sized stone the one under which they have darted to hide.

It has been stated that fifteen to twenty minnows, from two to two and one-half inches long, can be kept alive all day in a corked quart

TROUT HABITS; LURES AND USE

bottle of water by changing the water occasionally. If the fish are biting well it will be necessary to fill up the bottle only when replacing the water spilled in taking out a fresh bait.

For night fishing especially it is not necessary to preserve the minnow alive, in casting, and the large hook used may first be passed through the gills and then inserted lengthwise of the body, entering near the tail with the point directed toward the head, and in such a manner as to curve the body and cause the bait to revolve or spin when drawn through the water. (The natural minnows preserved in formalin solution, tablespoonful to a pint of water, are not bad emergency casting-bait, and are purchasable in various sizes, by the bottle. They are sometimes used on an Archer spinner.)

An easy way to *catch grasshoppers* is to scare them into the water and then pick them from the surface; or go into a corn-field, scaring them from the grass onto the corn, and reach around and grab them off the further side of the corn-blades to where they retreat to hide from you; their shadows will show through the leaves on your side, revealing their location.

Grasshoppers—the yellow-bellied field fellows about one and one-quarter inches long—being one of the best of all-round baits for trout, bass, and the smaller fish—pan-fish—as well, during late July, all of August, and even well into mild

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October, Mr. George Gilbert's ingenious method of catching them wholesale as revealed in *Forest and Stream*, is worthy of extended publicity. (Special attention of Dr. van Dyke.) Two bait hunters, armed with a well-dampened piece of cheese-cloth a yard wide and three yards long, seek a level space where the grass is not too high. Such a favorable spot is often located, in midsummer, alongside a road or in a field clearing, that is swarming with grass-hoppers. Each person holds the net at one end, so that it is spread out evenly and sets vertically between them. Make the "drive" against the wind if a palpable breeze, at a good jog for about fifty paces, with the lower edge of net just clearing the top of the grass. The hoppers, alarmed, rise from the grass and will lodge against the net and cling there because of the dampness. Then, at a signal, come together quickly, before the "belly" has had a chance to get out of the net, and wad the net into a loose ball. Sit down, unroll the net a little at a time and pick out your captives. Under favorable conditions, as on a hot August day and in a meadow recently cut over, you may net three hundred in a single haul.

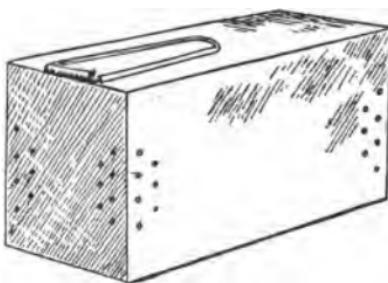
Store them in a tin box that is watertight at bottom and sides, but is provided with a number of fine air holes near the corners, and with a two-inch slot at one end of the top, about

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three-eighths of an inch wide and closing with a sliding door. Keep the box out of the hot sun. For wading, carry a supply in one of the boxes, having a slide in the cover, in which several brands of "cube-cut" or "grain-cut" tobaccos are packed in.

A Dip into Piscatorial Entomology. — A concise summary here of the *metamorphoses of insect life* will be helpful. In its first state an insect is called a *larva*. Grubs, caterpillars, and maggots or gentles are the more worm-like larval (creeping) forms of insects of different orders; thus the larvæ of flies are called maggots, of beetles are termed grubs, and those of butterflies are caterpillars. The hellgramite or dobson, so highly valued by the bass fisherman, is the larva of a large winged-insect called *Corydalus cornutus*.

Hellgramites are found under the stones in stony, pebbly, shallow parts of streams. Roll the stone over and catch the dobson in a net held just below, as he floats downstream. Besides frogs and minnows, which are both trout and bass baits, the remaining principal natural baits for bass are



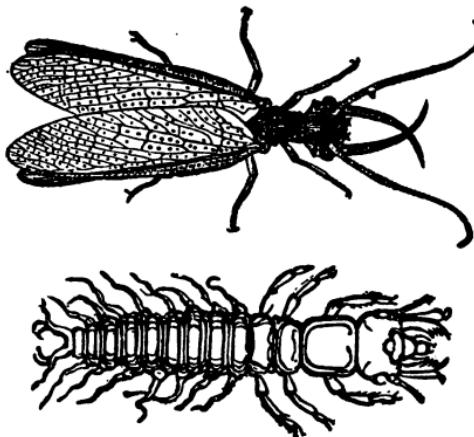
Grasshopper storage box

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small bullheads, lamprey eels, large worms, and the crawfish. This little fresh-water crab—which looks like a miniature lobster—feeds chiefly at night and then is easily picked up by means of a lantern or flashlight. They are used

both in the hard-shell and soft-shell stages, and seem to be of two varieties, light and dark. Some prefer the lighter - colored ones and not much over an inch and a half in length. Scat-

tering hashed raw beef in the water late in the afternoon will lure them out to feed. Frogs also are best caught with a small long-handled net, at night, and by dazzling them with a light. The giant garden worms, called "night-walkers" or "dew-worms," likewise are best hunted after dark, with flashlight or lantern, on lawns, after a rain that is the real thing or a shower simulated by the garden hose earlier in the evening; tread softly and grab quickly.



Corydalus cornutus and its aquatic larva, the hellgramite or dobson

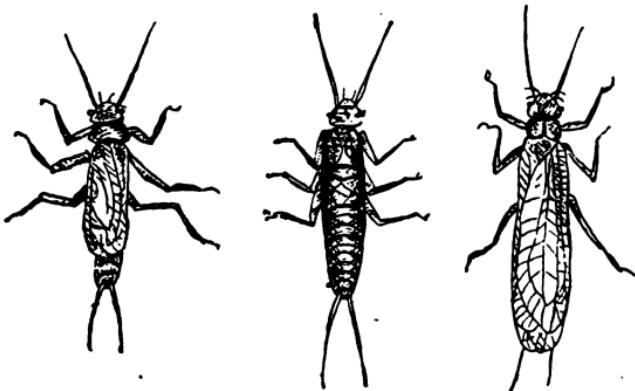
TROUT HABITS; LURES AND USE

To return to our entomology, from the larval stage the insect passes into the intermediate one of the *pupa*, and finally evolves into the *imago* or perfect insect. Some larvæ spin cocoons in the intermediate state in which they envelop themselves; a naked pupa is a chrysalis. Thus the pupæ of many insects are nearly motionless and partake of no food; the pupæ of others, as of the dragon-fly, are active and voracious. (They look something like a cricket, but are of a greenish-brown color rather than black, and are insectiverous. They have six mottled legs. The body comes to an oval point at the tail and is of triangular section—regular "torpedo-boat" stern—with a ridge up the middle of the back, and presents a ribbed appearance due to the overlapping plates of its coat of armor. The head is that of a miniature bullfrog. You can dig them out of marshy, muddy places along shore, among the débris of decaying vegetation. They are an *excellent perch bait*, fished near the bottom.) Again, this intermediate state in certain species differs only from the larva in the possession of wings, or from the imago in that the wings are yet rudimentary and unfit for perfect flight. Insects that closely resemble their parents immediately on hatching out from the egg are said to present an incomplete metamorphosis and their young at all stages are called nymphs (*nymphæ*).

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Certain of these larval forms of aquatic insects or their natural (shed skins) or artificial cases are often seen attached to the stones along the stream.

The chief part of an insect's life is spent in the intermediate or *sub-imago* state, the brief



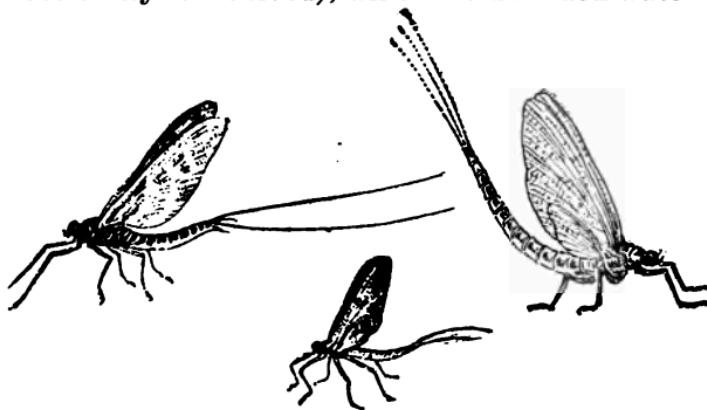
Stone-fly (male, aquatic larva, and female)

existence in the perfect state serving mainly for propagation. Many pass out of existence before their eggs are hatched. The sexes are distinct in all, and marked differences may be exhibited in males and females of the same species, in size, color, and form. All are very fond of heat and display their greatest activity only in warm weather. The metamorphoses or transformations of insects are wonder- and admiration-inspiring phenomena. "A worm in-

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habiting a muddy pool becomes a winged creature that sports in the air. A crawling caterpillar that ravenously devours some kind of herbage with its horny jaws, eating vastly more in proportion to its size than an ox, is converted into a splendid butterfly, flitting from flower to flower and feeding only on nectareous juices."

All the *Ephemeridae* (of ephemeral existence, extremely short-lived), which include such water



March brown, dun, and May-fly or large green drake
(After Louis Rhead)

flies—those having aquatic larvæ, which are of most interest to the angler—as the May-flies, duns, and March browns, sail downstream with *folded and upright wings*. Most of the various land flies, that are blown onto the water from overhanging trees and bushes, have *flat wings*.

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Being largely *blown* to the fish, they naturally are feeding on them chiefly on *cold, blustery days*. In this class are included the Cowdung, Alder, Willow, Hawthorne, and Oak; as well as the Bluebottle, etc., illustrated further on, and many others. Presently we will note some of the interesting comments on this subject of the late Mr. David Foster.



Alder, grannom, and black gnat

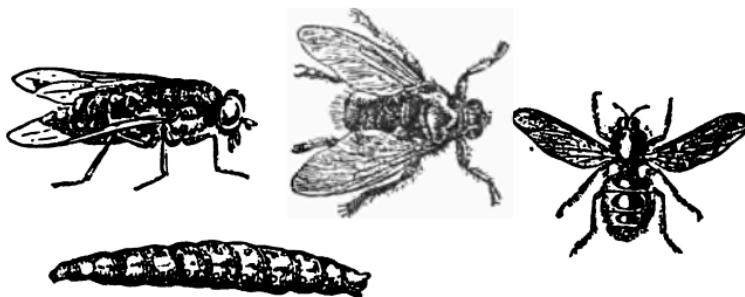


Hawthorne, cowdung, oak, and willow

Maggots or gentles are the larvæ of an extensive order of two-winged insects (*Diptera*), to which belongs the common house-fly. The horse-fly, gad-fly, and the bluebottle-fly are among the largest of the varieties; they are flat winged, and we show illustrations of the natural flies. Their larvæ are easily bred by the angler and may be carried in a box of cornmeal. They should be hooked by the neck or blunter end, and two or three may be used at once.

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To grow these maggots put a quarter of a pound of raw liver or fish in a cigar-box filled with sawdust or cornmeal, expose to the sun and the flies will deposit their eggs on it. Leave it hung up in the open air; and the development is more rapid the warmer the temperature. The creepers develop from the eggs in from three to six days and attain full growth in about another six days—an inch, more or less, accord-



Gad-fly and maggot, horse-fly, and bluebottle-fly

ing to the species of fly. The adult state of these insects lasts from two to four weeks—a tremendously antiquated age compared with the existence of the ephemerals. If another batch is required, add fresh meat or fish and other flies will deposit eggs, and thus a supply of this bait is always available so long as flies are about. If you be not "nice to foul your fingers, which good Anglers seldom are," and "if you desire to keep gentles to fish with all the year,"

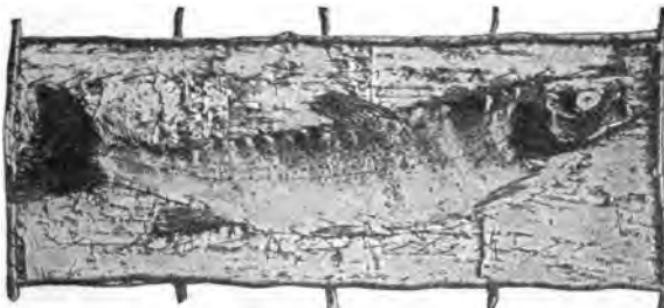
STREAMCRAFT

you can follow Walton's suggestion and "get a dead cat, and let it be fly-blown, and when the gentles begin to be alive and to stir, then bury it and them in soft earth, but as free from frost as you can, and these you may dig up at any time when you intend to use them; these will last till March, and about that time turn to be flies."

Devices sometimes employed to get the bait where it is wanted or to render it more effective, are floating it downstream on a chip or leaf, or feeding it to the fish before angling for them—a practise akin to salt-water "chumming." The same thing is sometimes done at night, within the glare on the water, at a likely spot, of a fire built at the water's edge. A very foxy stunt is to drop a fly on a patch of floating foam—which collects insects—and allow it to rest there till it sinks through. Other forms of decoying fish are sometimes resorted to when food is sorely needed in camp, as placing some minnows in a large corked bottle, the cork having a small hole through it, and suspending it in mid-water. Maggots falling from fly-blown meat hung over a fish hole will likewise entice fish. A blind may be made of branches, to hide behind, in the vicinity of some especially promising hole affording no natural shelter from which to stalk it; this should be constructed the day before fishing.

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Other Trout Habits.—Further data in reference to the habits of trout are that the principal feeding times are from five to ten A. M. and five to eight P. M. They rarely rise at night after the steam begins to come up like smoke from the water, or in the early morning till it has cleared away. After a hard rain or in misty



Brown trout, 20 inches. Dried skin mounted flat on birch-bark panel, Nipigon Indian style, in camp by the author day after it was caught, and eaten

weather they are all-day feeders. The observation that the largest trout are not great surface feeders applies more particularly to the native Eastern brook trout (*Salvelinus fontinalis*) than to the brown or German trout (*Salmo fario*).³ Trout are more agile in rapids than in shallow water or pools, and must be struck quicker—indeed they frequently hook themselves in swift water, before the angler has time to strike;

³ Eggs originally introduced into America from Germany, by von Behr in 1882, the first hatching being in 1883.

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but irrespective of this the large trout themselves often strike more deliberately than do small ones. Southard says they rarely rise to the artificial fly a second time the same day [if pricked]; which means that they do—sometimes.

The swift-water trout is liable to be lighter colored and slimmer than the denizen of the dark, deep, shaded pool, which often is chunky and of very dark color—this referring to the same species in the same stream. Under certain conditions spotted trout (*fontinalis*) may spend a good part of their existence, like salmon, in salt water—*sea-trout* (but the steelhead trout of the West is a sea-going rainbow); they then grow heavy very quickly and change coloration, losing their spots. In lakes and ponds all trout and bass are largely ground feeders because they find most of their food near the bottom. Other interesting observations, by Mr. Southard (*Trout Fly-Fishing in America*), are as follows:

Rise most readily to artificial fly when they have been and are feeding and almost gorged. [Apparently regard the surface fly as a delicacy or sort of dessert—see further explanation ahead, in discussing “bulging” trout.]

Large “rolling” fish taken only on sunken fly.

Use larger flies in early Spring, numbers 4 to 6, when the fishes’ sight is poor.

September (when open season) one of the

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best times for fly-fishing both in lakes and streams—just before spawning.

Spawning grounds are located mostly in the headwaters of smaller, tributary streams. [Here is a hint to fish well up on the headwaters as the open season wanes—the fish are ascending.]

Winter Habitat (Nov. 1 to April 1).—Spawning season over, in deepest water; burrow in mud. Dark coloration.

Spring Habitat (April 1 to June 15).—Shallow, medium depth, along shore, on shoals or bars. Subdued coloration.

Summer Habitat (June 15 to Aug. 15).—Medium and deep water, not so deep as Winter; under-surface feeding, most shy. Bright coloration.

Fall Habitat (Aug. 15 to Nov. 1).—Medium and shallow water, lightish bottoms. Brilliant coloration [“nuptial dress”].

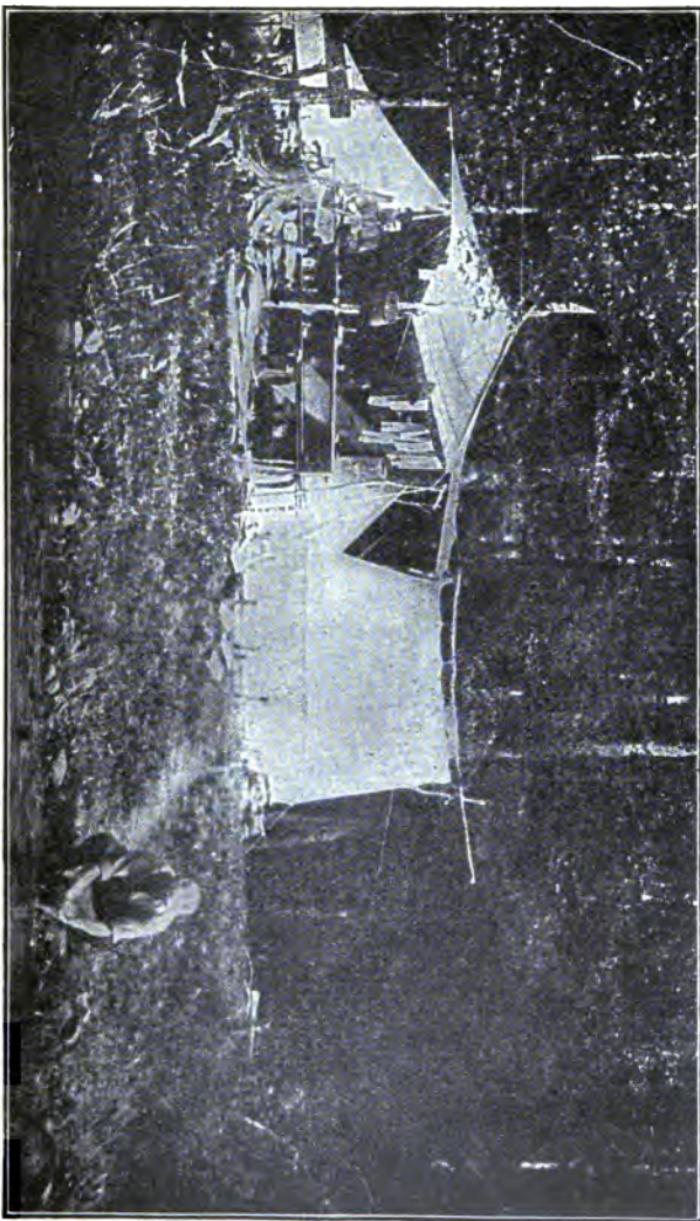
The spawning process is thus accomplished: The female scoops out a nest in the gravel by fanning with her tail and moving the larger pebbles in her mouth or with her nose, and deposits the eggs. The male, hovering near, ejects his milt upon them. Only a very small per-cent are productive, owing to destruction by minnows and various other spawn-eating creatures. Both male and female trouts leave the eggs entirely unprotected after spawning; but bass watch their nest vigilantly.

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In lakes and fairly still water of streams trout stay in or near the shallow water they first seek in Spring after coming out of deep water, till they have finished "scouring" themselves on light gravelly bottoms; then they "school," move to other shallow places, and by the middle of June settle in some good place for the Summer.

Modifying the ancient dictum as to using *small and dark flies in clear water and bright weather, and lighter and larger flies in deep and dark water and cloudy weather and for evening*, Mr. Southard says dark flies get more rises than light in the evening, except it be overcast and very dark, when the lighter patterns should be used. He recommends especially here dark flies having silver bodies, as Silver Doctor, Silver Spot, and Silver Gnat. Very light-colored flies are less effective in rapid-stream fishing.

As a rule, bigger flies will catch bigger fish, though not always; and large trout are caught at night on flies as large as those ever used for bass or even salmon. With such a lure on the night of August 9th, 1918, H. B. Christian caught at Bradley's-rock pool on the Neversink River, a brown trout measuring twenty-five inches in length and weighing seven pounds. I first heard about this gigantic brownie—probably the largest fish ever killed with a fly on the Neversink, if not indeed the largest on record for the river—the following day from Christian himself,



THE AUTHOR'S "BIG-BIRCH" FISHING CAMP

Photo by C. E. Williams
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who sought the shelter of my "Big-Birch" camp in a heavy downpour near midnight. And when I was leaving Liberty for home one day later, the catch was confirmed by the baggage agent at the railway station, who said the fish had been brought to Liberty to be mounted; so anglers visiting this neighborhood next Spring doubtless can have the rare opportunity of verifying one big-fish story. How would you like to read an authoritative and complete autobiography of such a trout?

Wet or Dry Fly?—Huckles.—Considering all seasons, weathers, and waters, both native and brown trouts, more fish will be caught on the wet than on the dry fly, but the latter method is likely to take larger brown than native trout, it is preëminently the late-season method, and it is the more artistic; here is the gist of the whole matter.

Good dry flies are: Alder, Black Gnat, Pale Evening (Watery) Dun, Whirling Dun, Yellow Dun, Spent Gnat (both male and female), Jennie Spinner, Hare's Ear Dun, Wickham's Fancy, Red Spinner, March Brown, Silver Sedge, May-fly (Green Drake), Cowdung, Cinnamon, Iron Dun. In addition to patterns included in this list, Mr. George M. L. La Branche, our foremost American dry-fly expert, notes among his favorites: Gold-Ribbed Hare's Ear, Flight's Fancy, Willow, Mole, Black Hackle,

TROUT HABITS; LURES AND USE

and Marlow Buzz, the latter two to simulate land flies blown onto the water.

Mr. George A. B. Dewar, a prominent British expert in this branch of angling, some years ago published this preferred list (*The Book of the Dry Fly*): 1—Olive Dun, 2—Blue Dun, 3—Red Spinner (small, the imago of the two foregoing), 4—Iron Blue Dun, and its imago, which is 5—Jennie Spinner, 6—March Brown, and its imago, which is 7—Great Red Spinner, 8—Yellow Dun (essentially a Summer fly—the Yellow Sally is a flat-winged fly), 9—Red Quill, 10—May-fly (when the season is on, from last of May to late in June—small-winged and darker pattern preferred), and its imago, which is 11—Spent Gnat (“the one succulent May-fly in its last and emaciated condition”), 12—Alder, 13—Sedge, 14—Grannom. Later Mr. Dewar revised and reduced this list, retaining those numbered above 1, 4, 9, 10, 12, and 13, to which he added Hare’s Ear and the two *fancy patterns*, Wickham’s Fancy and Governor, being thoroughly convinced of their value.

The Olive Dun he considers best of all through the whole season, and mentions that the Alder kills throughout the season also. The spent gnats and spinners come out in the evening largely, the Red Spinner being especially good in July and August. Sedge and Red Quill likewise are good evening patterns.

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The commercial "Dri-Fli" or white paraffine oil may be sprayed on dry flies with an atomizer to assist flotation, or applied with a feather, etc. (Reference was made in the first chapter to Dr. Gove's "oil tip.") The writer has found convenient the small tubular metal receptacle with a screw cap, known as the "One-Drop" oil-can. Or kerosene oil, carried in a small wide-mouthed bottle, makes a perfectly efficient "floatem" in which to immerse them; and for the line, mutton-tallow is all the "deer-fat" necessary.

It is understood that the dry fly is cast up and across stream and allowed to drift down with the current uninfluenced by the angler, and cocked, with wings erect; and that four or five false casts are made into the air before permitting it to alight each time. Blowing upon the fly occasionally also assists in keeping hackle and wings in shape. While the fly is traveling downstream the left hand is employed in gathering in the slack, to keep the line measurably taut in anticipation of the rise of a fish, and the strike of the rodster which should instantly follow it. The great obstacle to the fly's floating down on the current in a lifelike manner, insurmountable at times, is the "drag," caused by the wind or current catching the loop of the line between the rod-tip and the cast and drawing the fly under. The only way

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to combat it is to get directly below the spot where you want to cast and to cast straight upstream into the wind, or to lay the line directly downstream—"drifting" it—so that the fly will keep ahead of the line. In casting across, a drag may be partially ameliorated by paying out some slack line so soon as the fly has dropped.

Especially in dry-fly fishing there is every advantage in keeping the *rod-point high at the end of the forward-cast*—

The fly thrown well up into the air drops altogether by gravity, and thus the fatal error of slapping it down on the water is wholly obviated;

There is more speed, hence certainty, in striking the fish;

In casting directly downstream, the lowering of the rod after the fly has alighted permits the fly to remain longer on the water before being pulled under by the current.

Angling does not differ from other things in life in that there is always something more to be learned in connection therewith. It would seem to be an anomaly to dry-fly fish *in the rain*; yet the writer has had the experience, late in the season, of fishing the sunken fly unsuccessfully under this condition, while an experienced local fisherman alongside of him killed trout after trout on the floating fly. When "Pop" Yorks' eye meets this reference he doubtless will

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recall the August afternoon of the circumstance. He used a very fine and long leader, a number 12 fly and threw it very high in the forward-cast so that the long drop to the water caused it to alight so gently that it floated, if not for long yet long enough to induce rises.

You are fishing with greater precision, in using the dry-fly method, if you cast only when you see fish rising. This English practise of "fishing the rise" obviates covering a lot of water where there are no fish and a lot of wear and tear on tackle; but the trout may be rising very sluggishly, then you have to "fish the water"—if you fish dry-fly at all—which is the usual American custom. It must not be forgotten that English dry-fly literature should be considered in connection with the shallow, clear, placid chalk-streams of the Southern part of the country, which especially are the haunt of the dry-fly man and are very different from our tumultuous mountain brooks and rivers.

The dry-fly angler is not an early riser, as there are few flies out before nine or ten o'clock. In the typical English method the angler concentrates all his attention on looking for a rising fish, and does not wet his line till he spots one. He particularly searches under both banks, and critically scrutinizes the deeper water at all bends, and the eddies or back-washes, meanwhile keeping the point of his

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rod down and himself out of sight of the fish as much as possible. A rise or surface-feeding fish is indicated by a mere dimpling of the water, with some bubbles, or by decided ripple-rings, and is accompanied by no perceptible sound or, again, by a decided commotion. This silent "dimpling" may mean either a small fish or a very big one. (But if he is a large trout, and you actually can *see* him rising to your cast, don't strike quickly.) When our patient, keenly observant, and persistent angler does spot his rise, he then stalks the fish, stealthily as an Indian, making a wide detour from the bank, and gets below him, the approach to the favorable casting position being made with greater caution than ever, and frequently in a crouching or even crawling attitude. Screening himself as much as compatible with efficient casting, the fisherman now, and not till now, gets actually to work.

Major Stewart Edward White, in *The Forest*, has a vivid passage about still-hunting the trout from a canoe on the absolutely quiet water of a wilderness lake probably never previously fished by a white man—"Hour after hour we stole here and there like conspirators. Where showed the circles of a fish's rise thither crept we to drop a fly, softly like down, on their center as in the bull's-eye of a target."

Upon this matter of the dry fly, Mr. Richard

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Clapham, who has had the advantage of long experience of sport both on English and Canadian rivers, writes interestingly in the *Recreation* magazine. "The 'purist,'" says he "—he who limits himself to the single dry fly, and who casts over a desirable rise only—handicaps himself tremendously. On many days few flies rise to the surface, and the angler waits patiently, to go home at last unrewarded. When such conditions prevail on the top of the water, there is often a good rise of insects below the surface, but owing perhaps to chill or from other causes, the creatures are swept down by the current and never reach the air at all. The wet-fly man would then fill his basket, whereas the 'purist', it being unorthodox for him to sink his fly, would simply have to grin and bear it.

"A steady and consistent examination of the stomachs of captured trout will reveal the fact that [aside from minnows or others of the class of more sizable foods] larvæ and nymphs are the chief food of the fish, winged insects being only an occasional article of diet. Certain of the *Ephemeridæ* go down into the water to lay their eggs, and very frequently they become sodden with wet ere they can again reach the surface. Other flies are blown into the water and drowned, or are chilled by the air and fall to the stream. It is these insects under the surface which most attract the trout, and for

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this reason *the wet fly is a far better all-round killer than the dry.*"

It would seem that trout do generally feed freely on the nymphæ at the beginning of a hatch, and that *not till gorged on these do they rise to the surface for winged insects.* Fish thus taking nymphs just beneath the surface just prior to the insects hatching into the winged sub-imago state, are called by our English cousins, who have made a very refined study of these matters, "bulging" trout. They rush to catch the nymphs as they burst through their shucks, and these quick movements cause a commotion close under the surface very like to that of a fair-rising trout at a surface fly. They then will of course not touch the artificial floating-fly, for they take no notice even of the natural one sailing down over them, as they "*prefer one course of their meals at a time*" (Dewar).

Mr. H. B. Christian of Neversink, N. Y., in response to my request, writes as follows: "Without any desire to dispute anyone's pet theory, I will state it as my conviction that he who says that wet flies will *invariably* catch more and larger trout than dry flies, if that statement be taken to include both the native and the brown trouts, has not used the dry fly sufficiently to give it a fair trial, and perhaps has not had the proper kind of dry flies when he

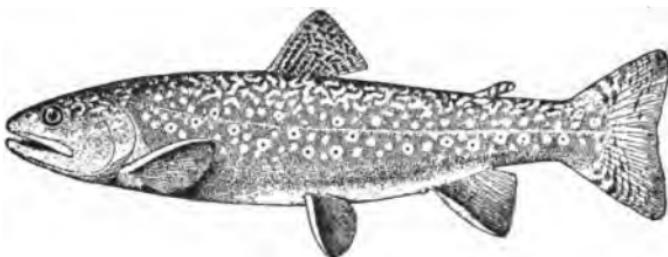
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was using them. Understand that I do not go back on the wet fly, which I use every year, with good success, *when the streams are high and after dark*; and after dark you will take some very large trout. But I would recommend the dry fly for daytime fishing. I have gone to a pool after several fishermen had fished it with wet flies without taking a single fish, and with some of them yet fishing the pool, while others had gone ashore to sit down and watch me, and have taken fifteen trout from that pool on a dry fly; and you can take a good-sized old brown trout on a dry fly when he wouldn't look at any kind of a wet fly. For the best sport, by which I mean taking more of the nicest fish, from streams in which the brown trout predominates, I would recommend that considerable attention be devoted to dry flies."

This testimony concerning the brown trout's partiality to the dry fly is particularly significant because this species is the trout indigenous to Europe, where the dry fly originally was "hatched." The native Eastern brook trout is easily distinguished from the brown by its darker back with vermiculate or "worm-track" markings—similar to those on the common mackerel—by its *yellow* spots interspersed with the red, by the blue border to the red spots, by the white and black edge to the red fins, and by the *seeming* absence of scales. The

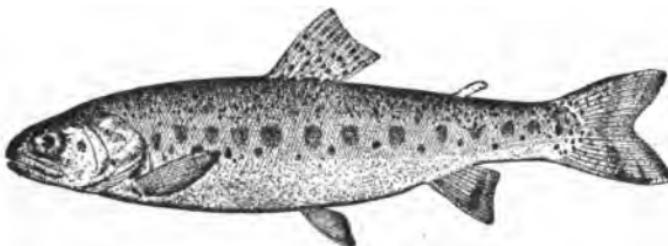
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rainbow trout (*Salmo irideus*), native to California but introduced unto some Eastern waters inhabited by both of the others, has a beautiful



The native Eastern trout has a vermiculate back

blued-steel back, fine black spots, and is further adorned with iridescent merging horizontal bands of bright colors along its sides, in which reddish-pink at the middle is most conspicuous.



The rainbow trout

This trout, contrary to the usual custom of the native Eastern and the brown trouts, habitually jumps clear of the water when hooked; the others dart about in the water, with few excep-

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tions to the rule, the larger ones making instanter for the bottom or the nearest refuge of rocks or roots.

The brown trout grows much faster than either of the others and thrives in water of a higher temperature.

Irrespective of the wet and dry fly distinction, artificial flies are divided into two general classes, *winged and hackles or palmers*. Some anglers claim that the latter are the best killers. Undoubtedly they are, when no natural flies are to be seen upon the surface of the water, and when the trout are gorging themselves on the larval or creeper forms, which are moving about under the water preparatory to further evolution—that is when the fish are “bulging,” as already discussed. These larvæ have no wings, so the hackles naturally represent the “fly” that the trout are feeding upon at these particular periods, much better than do the winged patterns. At such times, when dressing your fish at the streamside, you will note they are full of little striped yellow-bellied things that are wingless. It may even be that this will happen in the forenoon, and that in the afternoon these same insects may be rising to and floating on the surface of the water, and at that time you will have very poor success on your palmers, as the larvæ have now grown wings and look very different to the trout.

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Another time when the trout are very difficult to attract with the artificial fly yet when they may erroneously be thought to be rising, is when they are plunged head downward into the weeds, grubbing or in search of shrimp, snails, etc. They are then said to be "tailing," because they are generally observed thus engaged in shallow water, and if the water is sufficiently shallow the tail of the fish will break the surface and cause a rippling easily mistaken at a distance for that of rising fish. A popular English expedient to provoke a tailing trout into striking, is fishing a big Alder-fly downstream; it is allowed to sink and is kept moving, in jerks. Yet one more well-recognized condition when success at fly-fishing is well-nigh hopeless, is when the water is covered with myriads of the minutest creatures, little larger than a pin-head, on which the fish are feeding industriously. These midges are feelingly dubbed "smuts" or "curses" by the English angler.

Typical dry flies (Halford style) have a pair of double wings set upright or pointing slightly forward, toward the head of the fly, and are otherwise so dressed as to favor buoyancy. *But you can fish a dry fly wet*, and some anglers even prefer this style when fishing with the sunken fly. The stock wet fly, with a single pair of flat wings, is not however adapted for dry-fly work.

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Mr. Frederick M. Halford, a distinguished English angler-author, was the most eminent modern revivalist and apostle of the dry-fly cult, which unquestionably has been overworked by some of his more zealous followers. Mr. R. B. Marston of the London *Fishing Gazette* notes that James Ogden of Cheltenham, England, claims in his book on *Fly Tying*, published in 1879, that he originated and introduced the upright-winged floating fly about the year 1840; and that Pulman, in his *Vade-Mecum of Fly-Fishing for Trout*, has a very clear description of the use of the dry fly in his third edition—1851. If it was in the first edition, that was in 1841. Also that Francis Francis has some most pertinent references to dry-fly fishing, in his *Book on Angling* (1867). But the trick of oiling the fly is of much more recent origin.

When the late Theodore Gordon first began to use the dry fly he wrote to Mr. Halford to learn how it was tied, in response to which he received some of the Halford flies and a long letter on the subject. Gordon's experience was that the particular patterns which he received from England gave service on American streams much inferior to native creations in imitation of certain "American bugs;" though we cannot say authoritatively whether water flies differ materially in different sections of the world. But why shouldn't they? Many of the other kinds

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of insects and many animals and flowers are peculiar to particular climates and conditions. We can tell anyone who wishes to take the trouble, how the question might very definitely be settled and to his own personal satisfaction. Let him send some prevalent native insects to Mr. Marston and request a report on the success of a search for their analogs among specimens in the collection of British naturals in the museum of the Fly-Fishers' Club. The recently-elected President of this old institution, by the way, is Mr. Walter D. Coggeshall, an American for the first time in its history we believe.

It was the writer's privilege to meet the Sage of the Neversink, super-angler, and ardent nature student the Summer before his death, alongside the stream that he loved. In the course of casual conversation he mentioned that he was tying some flies for a gentleman in Nova Scotia, after specimens of native insects which had been sent him. Some two years later it was also my pleasure to make the acquaintance of Dr. (now Lieutenant-Commander) Edward Breck, the veteran woodsman and author of *The Way of the Woods*, at an interesting lecture that he gave in the interest of the Naval Defense League. The Neversink country being mentioned, Dr. Breck inquired if I had ever met Gordon. I then recalled the incident of the "Nova Scotia gentleman." "Yes," said Breck,

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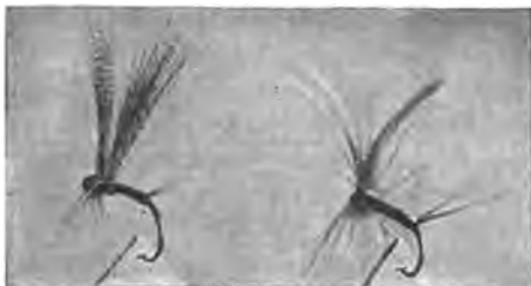
"I am that fellow." The following Summer (1916), for the July *Forest and Stream*, Dr. Breck wrote: "I don't think our wild Nova Scotia trout take much to the dry fly, but I use it mostly here, all the same, for, though the wet fly gets five where the dry lures one, *the use of the dry fly is far more fascinating*. The best luck I have had with some flies made for me by that finest of all anglers, the late Theodore Gordon. These were tied by Gordon from insects, well preserved, that I sent him from here, and were beautifully wrought."

While no one may fill Theodore Gordon's unique place as a writer specially beloved of all American anglers, the reader may be interested to learn that flies tied in the exquisite Gordon fashion are still obtainable from Gordon's friend and neighbor, Mr. H. B. Christian of Neversink, N. Y. Mr. Roy Steenrod of Liberty, N. Y., likewise is familiar with the patterns, and we understand that to these gentlemen was bequeathed the bulk of Gordon's tying materials. Mr. Christian, by the way, is my authority for the statement that the fly made up commercially by a well-known tackle-house under the name of the "Gordon" was called a Golden Spinner by Gordon himself. It never was so successful on Neversink waters as the Blue Quill Gordon, the fly to which Gordon did attach his name. This has a quill body wound with gold wire, the

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effect being of a bluish body with a fine brown ribbing; the wings are of wood-duck, and the hackle and tail are gray-blue.

The writer knows a man who is an expert angler and fly-tier. A mutual acquaintance is considerably more expert than is this gentleman. The first told me that he knew a third angler



Blue quill Gordon and dun split-wing dry flies
(Tied by H. B. Christian)

who, though not able consistently to catch more trout than our mutual friend, can and does catch more *large* brown trout than any angler known to him. And this is how he does it: He casts only over rising trout, and *only* over rising *large* trout. He knows when it is a large trout that rises from the *character of the rise*. (John Burroughs has stated that a trout, when it comes to the surface, starts a circle about its own length in diameter.) He uses only the dry fly, and says that if he could have but one fly he would pick

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a Whirling Dun. Now, this third man *does* come pretty near to being skilful.

Upstream Fishing.—As trout habitually lie poised or resting with their heads pointing against the current, upstream, whether or not on the immediate lookout for food floating down, it often is good generalship, especially in fishing the smaller streams having a quick fall, and all the more so when the water is low and clear, to fish *up the stream* and thus approach your quarry from below and beneath, regardless of whether you are fishing wet or dry, "worming it," or even if fishing with the minnow. By this plan not only are the fish less liable to see you, but also there is less chance of pulling the hook out of their mouths in striking, and any muddying of the water or loosening of gravel in wading will not disturb fish in the unfished water above. If using the minnow the bait may be cast up and across into the deeper water, and having completed the arc which brings it to the line limit below the fisherman, it may then be drawn up to him against the current, along the shallower side of the stream, in a series of twitches.

As upstream work is largely short-line fishing—the arm reaching out to the uttermost in making the cast and the rod being held high and the flies drawn lightly over the surface of the water directly toward the caster with a



."The smaller, rapid streams that are full of rocks and small pools,"

By courtesy of Forest and Stream

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slow, quivering, and upward and backward movement—it is here that the ideal of “no part of the tackle on the water except the flies” may appreciably be realized. In this way trout occasionally are stalked and taken at the end of not over ten feet of line. But this does not succeed in broad, shallow, quiet, and open water.

A friend who habitually fished the smaller, rapid streams that are full of rocks and small pools and was wonderfully successful at this style of angling, always used the finest kind of *undressed-silk line* and a very light eight-foot rod. He made but a single cast in each likely spot and passed swiftly to the next; nor did he seem to bother especially about quiet movements, but oh, with what beautiful, enviable, and almost effortless precision that leader *always* straightened! and how tantalizingly his flies danced deftly upon the water! I have never known an angler who could quicker cover a stream than this soft-spoken slight six-footer, and victim though he was of the “great white plague,” I had all I could do to keep apace with him. The first time the writer ever consciously set foot in trout water he “climbed” up the brook behind him and saw him reel thirty fish in less than two hours. They mostly were brown trout, some were natives, and there were a few rainbows; none were under seven inches and

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the largest measured twelve. The witchery of the place comes back to me after all the years, the fascination with which I watched the trained agility of his flexible wrist that flicked the flies about with such delicate accuracy, and the keen interest with which I noted the distinctive markings of the beautiful creatures—spread out on a bed of ferns while we reclined on the green shady bank of the stream—as elucidated by the kindly tutor who long since made his last earthly strike. How empty is the creel of life without sweet recollection and blessed hope of the future!

About the only contraindication for upstream angling is heavy water or a very swift current that is difficult, dangerous, or impossible to wade against; and contrary to the notion of the dry-fly zealot, his method of angling is applicable not only to still water, but may successfully be practised anywhere that the fly will float.

Trout Habits; Lures and their Use (Concluded)

THE FISHER'S CALL

The moor-cock is crowing o'er mountain and fell
And the sun drinks the dew from the blue heather-bell;
Her song of the morning the lark sings on high,
And hark! 't is the milk-maid a-carolling by.

Then up, fishers, up! to the waters away!
Where the bright trout is leaping in search of his prey.

Oh, what can the joys of the angler excel
As he follows the stream in its course through the dell!
Where ev'ry wild flower is blooming in pride,
And the blackbird sings sweet, with his mate by his side.

Then up, fishers, up! to the waters away!
Where the bright trout is leaping in search of his prey.

'T is pleasant to walk at the first blush of morn,
In Spring when the blossom is white on the thorn,
By the clear mountain stream that rolls sparkling and free,
O'er crag and through vale, its glad course to the sea.

Then up, fishers, up! to the waters away!
Where the bright trout is leaping in search of his prey.

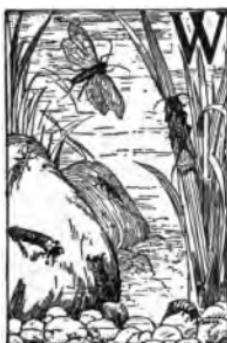
In the pools deep and still, where the yellow trouts lie,
Like the fall of a rose-leaf we'll throw the light fly;
Where the waters flow gently, or rapidly foam,
We'll load well our creels and hie merrily home.

Then up, fishers, up! to the waters away!
Where the bright trout is leaping in search of his prey.

W. E. CHATTO ("STEPHEN OLIVER")

IV

Trout Habits; Lures and their Use (Concluded)



WHEN it comes to the manipulation of the wet fly after it has been cast, "*fishing the fly*," our real expert customarily does not draw it against the current, but after casting it up and across the stream, draws it diagonally across and down, on or just under the surface generally, and recovers it with the back-cast before it comes to a stop by the straightening of the line. The fly should most always be played deliberately over or through the water, *not quickly*; it should remain a *perceptible time*, and longer on still water. A good plan is to pause after it alights—draw a short distance—pause—draw again—pause—then make the back-cast. Flies are best played upon the surface by an upward and backward movement of the rod, under the surface by a side and upward movement.

It is better to use but one fly in stream fishing and two for lake fishing, and when using two

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the dropper or bob may just touch the water occasionally, the tail or bottom fly then being under. Flies should be attached to the leader not less than three feet apart. Mr. Southard commends fishing with the fly from four to six inches underneath the surface in calm water without a ripple; also the plan of making a few false casts even in wet-fly fishing, placing the fly *within an inch or two of the surface* before landing it quietly, when fish are rising to the surface.

Striking the Fish.—The following advice is pertinent with regard to the attempt at hooking or striking the fish, when fishing with the fly. It must be done very quickly in clear water with a snappy rise; quickly in roily water with an ordinary rise; slowly when a slow rise. The greater the slack in the line the greater must be the force of the strike; less force is required on than under the surface; less force in swift than in still water. A slack line and low rod-point when fishing with the wet fly means that the fly is submerged. We repeat that large fish generally rise deliberately, often quietly sucking in the lure rather than "striking" it, and that they then should be struck deliberately by the rodster, especially if the fish itself is clearly seen in rising. The best general rule for striking is that you must not wait to *feel* anything but should twitch your wrist the instant you *see* any disturbance of the water in the vicinity

TROUT HABITS; LURES AND USE

of your fly. The novice needs also to be cautioned that *when using very fine leaders, as often employed in dry-fly angling, the "strike" should consist of hardly more than a tightening on the line, else the tackle is likely to part; even an old hand may find himself reminded of this after a moment of excitement in the presence of an exceptionally heavy rise following a prolonged period of unfruitful casting.*

Playing and Landing the Fish.—Ordinarily the fish when hooked is then “played”—alternately allowed to run and being reeled in a bit, or anon held steady on the taut line and spring of the rod—until when exhausted he is finally reeled in short, brought to the surface where he lies over on his side, when he is quietly netted, the landing-net being cautiously submerged well clear of him and brought *slowly* up underneath—no hasty “side-swiping” movements. If an unusually large fish is hooked in a stiff current, the angler sometimes may go ashore and endeavor to get below him, before completing the capture. It is this practise of playing which admits of landing a fish on the fine tackle that so often is essential to hooking him in the first place. Sir Walter Scott has pictured it neatly in some verses on salmon fishing in his favorite Tweed—

Till watchful eye and cautious hand
Have led his wasted strength to land.

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This is all right for open water. Again, having hooked a goodly fish close to cover in a deep hole, or in heavy rapids from whence he cannot be led into quieter water, or when on a long line, it may be imperative for any chance of saving the prize to "snub" him, to "give him the butt" at once, that is to raise the rod quickly, causing it to arch strongly, and to net him soon as possible without yielding an inch, even at the risk of a smash-up.

When without a net the only alternative is to lead your captive to the nearest accessible sufficiently shallow spot and to beach him. Fish are never lifted clear of the water on a light rod and line such as is correct for fly-fishing, so that the unsupported direct weight of the fish falls on the tackle.

No trout under full seven inches long or bass under ten inches should be creelred (these minimum legal lengths should be marked on your rod butt or net handle); and all fish that you decide to keep should be killed at once, either by hitting them over the head, by severing the vertebræ with a thrust of your knife-blade just back of the head, or by putting your thumb in the mouth and bending the head back and breaking the neck. This not only is merciful to the fish but preserves its flesh in better condition.

Not the least of the beauties of fishing with

TROUT HABITS; LURES AND USE

the artificial fly is that the quarry, not gorging the bait, is not hooked in a vital part, but lightly, through the lip. The angler should therefore see to it that this advantage is not spoiled by careless handling in the case of surplus and undersized fish that it is intended to return uninjured to the water. Such fish should always be handled with wet and not dry hands, to avoid rubbing off the natural protective slimy coating on the skin of the fish. Once this is damaged the fish becomes the prey of parasites and disease that shortly kill it. Instead of grabbing the captive by the gills and squeezing him while he struggles, the hook often can be freed without lifting him entirely from the water or from the net and without touching him with the hands at all.

Dapping or Dibbing.—Upon occasion a large trout may be caught from where he lies quietly in a deep hole, by "dapping" for him. This is often resorted to in some difficultly accessible shaded jungle spot late in the season. It necessitates an approach close enough so that the bait, whether natural or artificial, at the end of but a few feet of line and hanging downward from the rod which generally is projected from cover of the bank, is steadily lowered right in front of the fish's nose. If he is observed to be lying near the surface, a suitable natural bait, such as a grasshopper, or the dry fly may

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be used. As he is allowed no quarter when hooked but, as the inelegant phrase of the vernacular has it, is "hossed out," stout tackle is essential. This is the small boy's regular plan of campaign, with a "wum."

Most Popular Artificial Flies.—However rapid the development of the new style of fishing with the dry fly and however potent its charm upon the angler, it can never supplant the old way, the use of the wet and sunken fly. It must however be credited with the stimulation of closer study of natural stream entomology and of the endeavor to make the artificials truer copies of the real insects.

The previous discussion of fly patterns has had the new style chiefly in mind. This is not to say that these patterns are not effective for the older way; and we already have noted that many anglers prefer to use the dry-fly patterns largely in both styles of fishing, and the dry-fly forms as well. But we must not forget that there were wizards at the troutng game generations before such a thing as a dry fly was known generally in the land, and that fly-fishing, if not quite as old as recorded history, is certainly antiquated, having been practised at least nearly two thousand years ago. About 200 B. C. Theocritus records fishing with "the bait *fallacious* suspended from the rod," but gives no further details of the lure employed.

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But Martial wrote very definitely (A. D. 43-104):

Who hath not seen the *scarus* rise
Decoy'd and caught by fraudulent flies.

And Ælian, a Latin author of the early part of the third century, in his *De Naturâ Animalium*, a work originally written in Greek, tells how the Macedonians caught fish from the banks of the river Astracus with a familiar fly which the natives called the "Hippourus," and which was of about the size of a hornet but imitated the color of the wasp. The account goes on to say that in the river "there are fish with speckled skins. . . . These fish feed on a fly which is peculiar to the country, and which hovers over the water. . . . When, then, a fish observes a fly hovering above, it swims quickly up, . . . it opens its jaws and gulps down the fly, and withdraws under the rippling water. Now, though the fishermen know of this, they do not use these flies at all for bait for the fish; for if a man's hand touch them, they lose their color, their wings decay, and they become unfit for food for the fish. . . . But they have planned a snare for the fish, and get the better of them by their fishermen's craft. They fasten crimson wool round a hook, and fit to the wool two feathers, which grow under a cock's wattles, and which in color are like wax. Their rod is

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six feet long, and the line is of the same length. Then they throw their snare, and the fish, attracted and maddened by the color, comes up, thinking from the pretty sight, to get a dainty mouthful. When, however, it opens its jaws, it is caught by the hook, and enjoys a bitter repast—a captive."

But, hold! Perhaps that Hippourus was a floater after all? We have somewhere seen a translation which would have it that the author said they dropped it "*gently* down stream." We can hardly credit them, though, with being "exact imitationists"—unless the Macedonian wasps sported red vests!

Dealing then with fly-fishing in the broad, what may be said here as to what flies to use of the hundreds named, and stocked by the dealers? Kit Clarke's favorites were Brown Hackle, Montreal, Cahill, Coachman, Black Gnat, Grizzly King, Professor, Caddis, Scarlet Ibis. The last two he also commended for bass lures. Here is Thaddeus Norris's "big four:" Coachman, Black Gnat, Red Spinner, Red (Brown) Hackle. Nessmuk pinned his faith to these, for use in Northern Pennsylvania: Queen of the Water, Professor, Red Fox, Black May, Lead-Winged and White-Winged Coachmen, Red Hackle, Seth Green. For the Adirondacks, he specified Scarlet Ibis, Romeyn, Coachman, Royal Coachman, Red Hackle, Red-Bodied Ashy, Gray-

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Bodied Ashy. He found the Ashies good for black bass also. Another angler very familiar with these waters pronounces in favor of Montreal, Parmachene Belle, Brown Hackle, Brown Hen, Professor, Black Gnat, Alder, and Coachman.

We believe that it was Lou Darling who affirmed that wood-duck wing and orange body will take fish anywhere; and an eminent French-Canadian guide remarked of the Black Gnat that he is certainly "one damn fine gentleman." Mr. Southard inquired of a considerable number of practical anglers in various localities and thus found the following to be the most popular for all waters in all sections of the country, and in the order noted. Sixteen picked the Coachman for first choice; next came Professor with fourteen votes; and others as follows: Royal Coachman, 13; Black Gnat, 12; Brown Hackle, 11; White Miller, 11; Montreal, 9; Cowdung, 9; Grizzly King, 8; Scarlet Ibis, 8; Queen, 7; Silver Doctor, 5.

The Silver Doctor is a good submerged fly, when the fish are not surface feeding, as the silver body has a minnow quality; and when desirous of sinking a fly deeply—one or two feet or more beneath the surface—a split shot, placed on the leader a short distance ahead of the fly may be necessary. Some anglers go to the extent of having some of their flies dressed

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with a piece of lead wire tied to the shank of the hook.

Another good list of flies for "all times on all waters" is this: Dark (Lead-Winged) Coachman, Gray and Green Palmer, Ginger Palmer, Alder, Professor, Reuben Wood, March Brown, White Miller, Coachman, Royal Coachman, Cowdung, Brown and Red Palmer, Brown Hen (Governor), Queen of the Water, King of the Water, Abbey, Black Gnat, Grizzly King, Quaker.

Some of the results of Mr. Southard's canvass of individual States are as follows (he is a civil engineer by profession, has fished in many places, and has the trained, judicial mind to make a practical summary of data):

New York.—Coachman, 11; Brown Hackle, 9; Professor, 7; Green Drake, 5; Grizzly King, 5; Queen, 4; Cowdung, 4; Governor, 4; Montreal, 4; Beaverkill, 3; Black Gnat, 3; Reuben Wood, 3; Black Hackle, 3; Seth Green, 3; White Miller, 3; Orange Miller, 3; Van Patten, 2; Scarlet Ibis, 2; Royal Coachman, 2; Quaker, 2; Alder, 2.

New Jersey and Delaware.—Queen, 5; Coachman, 4; Cowdung, 4; Grizzly King, 3; Silver Doctor, 2; Polka, 2; Stone, 2; Black Gnat, 2; Yellow Sally, 2.

Vermont and New Hampshire.—Coachman, 3; Grizzly King, 3; Professor, 3; Black Gnat, 3;

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Alder, 2; Brown Hackle, 2; Fire-fly, 2; White Miller, 2; Grasshopper, 2; Seth Green, 2.

Maine.—Montreal, 14; Silver Doctor, 10; Parmachene Belle, 9; Brown Hackle, 7; Grizzly King, 5; Professor, 5; Scarlet Ibis, 5; Blue-jay, 3; White Miller, 3; Yellow May, 3; B. Pond, 2; Jenny Lind, 2; Jungle Cock, 2; Toodle (Doodle or Katoodle) Bug, 2; Quack Doctor, 2.

It will be found that the *darker and smaller flies (numbers 10, 12, and 14) will be most generally useful for Eastern waters, outside of Maine*, especially Cahill, Cowdung, Beaverkill, Hare's Ear, Queen, Brown and Gray Hackles, March Brown, Black Gnat, Black Ant, Professor.

Classifying artificials as to light, medium, or dark color, this table shows, per Southard,

SPECIAL INDICATIONS FOR USE OF FLIES

Fish the Flies On or Just Under the Water:

Early Morning.—Medium or dark flies. Light, if sky is overcast. *Daytime*.—Any kind in rough water. Dark, in calm water or slight ripple, with clear sky; light or medium, with similar water but dark sky. *Evening*.—Dark, with silver or large bodies, if sky gray or blue, and by moonlight; light, if sky dark, misty, or rainy.

Four Inches or More Under the Water:

Daytime.—Dark or medium, clear sky; light, if dark sky. *Evening*.—Makes little difference what color.

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The significance of these *sky observations* is that the sky is the background against which the *fish* sees the fly, though the water is the rodster's background.

Dark Flies are: Black Gnat, Black June, March Brown, Montreal, Brown Adder, Blue-bottle, Dark Stone, Governor, Cahill, Great Dun, Hawthorne, Prime Gnat, Orange Black, Carmen, Furnace, Wasp, Silver Gnat, Silver Doctor, Silver Horns.

Medium Flies are: Queen and King of Water, Professor, Brown Caughlan (Cofflin), Royal Governor, Lake Green, Gray Drake, Hamlin, General Hooker, Grizzly King, Light Cowdung, Cinnamon, Beauty, Alice, Alder, Abbey, August Dun, Marston's Fancy, Hare's Ear.

Light Flies are: White Miller, Lady of the Lake, Coachman, Gilt Coachman, Royal Coachman, Deer-fly, Fin-fly, Parmachene Belle, Dorset, Fern-fly, Beaverkill, Gosling, Jenny Lind, Neversink, Reuben Wood, Sunset, Yellow May, Yellow Hackle, Gray Drake, Blue Dun.

Another table, with both color and season indications, is this:

April and May (Darker Patterns): *April*—Black Gnat, March Brown, Coachman, Abbey, Dark Montreal, Grizzly King, Brown and Red Palmer. *May*—King of Water, Queen, Red Spinner, Professor, Yellow May, Golden Spinner, and all April patterns.

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June (Gayer Patterns as it Warms Up): Brown Hen (Governor), Dark Stone, Hawthorne, Green Drake, Brown Drake, Beaverkill, Alder, Cahill, Great Dun, Abbey, Brown Palmer, Coachman, Golden Spinner, Grizzly King, King and Queen of Water, Professor, Red Spinner, Yellow May.

July and August (Light Flies): White and Dusty Millers, Quaker, Reuben Wood, Cow-dung, Light Montreal, Oak, Royal Coachman, Brown Stone. In the Catskill country, Bee fished wet and the Yellow Dun dry fly are very successful in late Summer; and those flies having red bodies, as Abbey, King of the Water, Red Ant, or Red Spinner, have their advocates at this time of the year. One of the favorite local patterns has a Royal-Coachman body and wood-duck wings. This calls to mind the story of the Irish angler who placed no credence in local patterns as a sort of talismen for their particular districts, and who wrote his Scotch cousin, "But as you evidently do, I would like to dress a few flies for you to use on the Spey. To enable me to do this you must send me a bottle of Spey water for analysis; and a bottle of the whisky you drink there would also be of great assistance."

(Note that the patterns as given in the above lists do not all fall accurately into the dark, gay, and light classifications.)

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In midsummer when the water is low and clear and the trout are most shy, it often is almost useless to fly-fish except at early morning and in the evening, despite best efforts at fishing "fine and far-off," *i. e.*, with finest long leaders, smallest flies, and longest casts consistent with the most delicate manipulation of the fly. Best results may be expected from the floating fly and on the pools.

Color and Form of Artificials.—In fly-fishing most success will consistently be had by presenting a fair imitation of the natural fly upon which the fish are *feeding*, not simply of the fly that is over the water, nor even *on* the water. (This holds true despite the fact that curiously enough the most successful all-round fly ever designed, the Coachman, is purely a "fancy" pattern.)⁴ When several species are on the water at the same time, feeding fish may confine their attention to one [the kind out in greatest force], says the late Mr. H. G. McClelland, "Athenian," of the London *Fishing Gazette*. Fortunately for the observing angler, different flies that are "on" (a hatch or flight) together are generally dissimilar, as May-fly, Alder, Black Gnat. Perhaps the above observation applies more particularly to larger trout and when the flies

⁴ Said to be the invention of Tom Bosworth, royal coachman to Queen Victoria and to Kings William and George immediately preceding. Mary Orvis Marbury's book deals comprehensively with the pedigrees of popular artificials.

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are more abundant and the fish are feeding vigorously. Other patterns than that simulating the fly on the water, cast and recast, may create the impression that those flies are passing in large numbers.

When the fish are gorged and apathetic, "heretical" or fancy lures may seduce. An over-abundant hatch of flies often is unfavorable for the angler, paradoxical as this may seem. In the luxurious richness of the immediate natural food supply the imitation of the real fly is not good enough to be noticed—it simply is overwhelmingly outclassed; then it barely is possible there may be a chance for the outlandish, bizarre creation to attract attention.

The bodies of the artificials should emphasize the *colors of the undersides and sides* of the natural flies imitated, as their backs are almost invariably darker, and it is the bottom and sides of a fly that the trout sees.

Not a few anglers have claimed that the color of the artificial fly is altogether immaterial, and that it is the *form* which is all-important. We believe writers to be on solid ground when they refer to the superior attraction of slimness and neatness in the artificials, for most of them are *too bulky*; but when they state unreservedly that the color is inconsequential, it bids us pause; and they, too, would

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pause before reiterating this claim, after spending a few days fishing, for example, some of the most fruitful Catskill streams with no other lures on the cast than the Red Ibis and Parmachene Belle. This notion of the "anti-colorists" or formalists seems to be based largely upon experiments purporting to show that any fly upon or underneath the surface appears simply as a "silhouette with iridescent edges" to the protected vision of a *person* looking at it through a water medium. But in view of the fact, frequently experienced, that trout will persistently and consistently for a time take but one pattern of a single cast, including two or three flies of similar configuration but of distinctly different colorations, it would seem a fair deduction that *fish* may be able to see small objects through the water more keenly than is possible for human vision.

A friend of the writer's, an enthusiastic bass fisherman, found during a trip to the Rideau lake region of Canada, that a *red* "plug" or other lure in which red was predominant was the only thing with which he could do business, and with that he was successful at any time or spot. Another friend once had the experience while troutng on the Beaverkill, of fish refusing the Coachman fly but taking the Royal Coachman readily, the latter pattern differing from the former only by the addition of a little

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scarlet band on the middle of the body. This is all the more interesting because, as a rule, the trout of most of our Eastern streams—outside of Maine—are not attracted by gaudy flies and certainly are not partial to red displayed lavishly. A contrary experience, of refusing a Professor until the scarlet tail was cut off, was quite common—this operation practically converting that fly into a Queen of the Water. Again, how irreconcilable is this claim, as to the negative value of color, with the equally positive statement of Charles Bradford—who trout fished assiduously since he was ten years of age up to the time of his recent death at fifty-five—that he 'would not think of setting out on a two-weeks' fishing trip without at least two hundred flies of *fifty different patterns*; for though he might not use more than a dozen during the whole time, *how was he to know beforehand just what dozen they would be?*

What the present writer believes to be the real status of this matter sheds some light upon these apparently contradictory conclusions. This is that the color may have made little difference years ago, as is true today of the absolutely wild trout of some virgin waters so far back in the wilderness that it is impossible for anglers to reach them for a few days' fishing. Only under such conditions may trout still be taken on any kind of a fly regardless of what kind of

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insect is on the water. But for the sophisticated or "educated" trout of our much-fished Eastern streams, *it is necessary for consistently successful angling with the artificial fly to imitate the natural nearly as may be possible, and to give this imitation to the trout in a very neat and clever way.*

The opinion of Mr. H. B. Christian, whom we already have quoted, is likewise pertinent here. "Some mistakenly think that if they have big, fat, showy flies, and still better, three or four of these tied to one cast, that is what will catch the fish. The angler with this theory may either leave off fishing and may say there are no fish in the stream, or he will change his ways and go at it in the right way, and use nice *slim-bodied flies neatly tied, and a fine leader*, and have success. Most natural flies have slim bodies and only *six legs*; some insects have eight and perhaps ten, but that is about the limit. So don't use flies with about five hundred all in a bunch. To be sure we must have enough hackle to float the fly, but a few turns of hackle of the proper size makes plenty of legs."

The Englishman David Foster, author of the *Scientific Angler*, had some definite ideas upon our subject, and years ago made interesting original observations, based on a half-century's experience, that have largely been confirmed by subsequent authorities. He held that there are two main varieties of flies furnishing fish food,

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the erect-winged or *Ephemeridæ* and the flat-winged (*Phryganidæ*, *Muscedæ*, etc.). Of the latter there are many varieties, some land and some water flies. The *water flies* are of chief interest to the angler. Hatching under water, they rise to the surface, take to the air, sporting on or near their native element, and live but a few days to fulfill their procreative function. Of the up-wings there are four species: Olive Duns, Iron Blue Duns, large browns (March Brown, Turkey Brown, etc.), and the May-fly or Green Drake. The prevailing temperature of the atmosphere and water at the time of the larvæ and pupæ arriving at maturity *influences the color of the insect*, says Mr. Foster. For example, of one race but many colors—like man—all the Olive Duns are the progeny of the Red Spinner, and all that live to maturity become spinners. [Other English observers state that the color also differs on different waters and on different sections of the same stream, under like conditions of temperature; and some authorities refer as “spinners” to any slim-bodied long-legged flies having two long narrow wings.]

Each of these varieties of the up-wings lives three days after having ascended from the river's bed and burst their “swathings.” They then cast their skins, reappearing as spinners, in which final stage of their existence they are the fathers and the mothers of the new genera-

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tion. The sexes come together and drop to the surface of the water where the eggs are deposited. But even the up-winged flies may assume the spread-winged attitude to preserve their equilibrium in the wind.

The Olive Dun comes in February, when it is known as the Blue Dun. It has a lighter body a few weeks later, when the weather is warmer, and is called the Cocked-Winged Dun. By the first of April it is of a general olive color with a yellow-ribbed body. According to other changes it is variously known as the Yellow Dun of April (light and dark), Pale Blue Dun, Yellow Dun of May, Hare's Ear Dun, Pale Evening White, Common Yellow Dun, Golden Dun, July Dun, Dull Blue Dun, Pale Evening Dun.

The Iron Blue Dun is a species distinct from the Olive Dun, and only about half the size. Jennie Spinner is the source of the Iron Blue Dun range.

Such well-known standard flies as the Red-fly, Cinnamon, Willow, Grannom, Alder, Stone, Bluebottle, Oak, and Sand-fly are copied more accurately in a flat-winged, and some in a spread-winged style, than in the erect-winged form which is correct only for the ephemerals. Therefore to use a cocked-winged copy (in the dry fly) of a living flat-winged insect is at least incongruous. [And yet sometimes successful.]

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Some of Mr. Foster's *indications for the use of particular flies* are here noted:

Use smaller flies later in the season.

Red Hackle, when water slightly colored by rain.

Black Gnat is intermittent throughout whole season, and most killing in cold, blustery, stormy weather.

March Brown and variations good at all seasons. [Charles Bradford endorses this in *The Angler's Secret*—"The March Brown has the merit of killing everywhere. Fish with two flies of this pattern on the leader, one ribbed with gold twist and the other without. The fish take these for the two sexes of the fly. When the natural fly is out upon the water, and fish are voraciously taking it, angle with three flies on your foot-line, varying them in size and color. Whenever the angler is in doubt let him flail a March Brown." And Mr. Dewar says that although the March Brown appears chiefly on tumultuous streams, the artificial will kill on waters that never see the natural fly.]

Blue Dun is one of the best in use. Appears in March and continues through season, though varying in color; is deeper blue in early Spring.

Iron Blue Dun, from the middle of May to third week in June. Is in force on cold days during gleams of sunshine.

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Alder, in May and June; best toward evening.

Red and Black Ants are late-season flies.

Pale Dun is a Summer fly.

Whirling Blue Dun is a good evening fly.

Green Drake, well along in June; Gray Drake also, but better nights.

Yellow Sally, in May, June, and July.

Cowdung, for all seasons; windy days, through meadows.

Hare's Ear, in April and May.

It must be remembered, however, that British writers speak of European insect, stream, and weather conditions, and of the brown trout (*Salmo fario*), the predominant native trout of Europe; and though many of their observations hold good for the United States, others must be modified. American anglers are greatly indebted to Louis Rhead, talented artist as well as enthusiastic angler, for careful pioneer studies in the entomology of native waters, and an inspection of the numerous illustrations of naturals, painted from nature, in his book, *American Trout-Stream Insects*, will prove most interesting and profitable. Those who like to tie their own flies and who have passed the kindergarten stage will find there a wealth of information on colorations, body shapes, and wing positions.

In April, says Mr. Rhead, unless the weather is unusually mild at the opening of the season

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(April 15th), insects are small and scanty. Few trout rise before May first. Warm April days induce the rise of the female Shad-fly, Brown Drakes, Soldier Drake, and Needle-Tail Dun (locally called a "black gnat," as are many different flies). Use drakes dry, on the surface; the other two fish wet.

May.—This month sees about three large drakes and four duns, also a few large spinners. If warm and mild by May first, the Brown Drake (March Brown) fished dry is good. If cold use the female. Fishing wet, use the Shad-fly for tail and Needle-Tail Dun for dropper. The Shad-fly is abundant from early May till June 15th, and the Brown Drake is on the wing at the same time and places. Normal weather in May brings an abundance of flies, and trout are bold and voracious, feeding all day and night. The large Green Drake (May-fly) appears in growing abundance toward May 15th; next in value being the Brown Drake, Sand-fly, Black Gnat, Yellow Sally, Alder, Golden Spinner. The Shad-fly (male and female) is present throughout the month, so perhaps is best of all under the changing conditions of this usually erratic season.

[Any species of *Ephemera*, or allied genera, the matured flies of which appear in May are May-flies, zoologically speaking. When the British angler speaks of the May-fly he has in

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mind the Green Drake. Mr. Rhead says that the Shad-fly is the best of our American Mayflies, and that the heavy annual flight of the Green Drake as seen in Europe and so frequently mentioned in British angling literature is not common to American waters.—See further reference, in list of artificial flies, in last chapter.]

June.—The rise of large insects diminishes, but there are several yellowish to orange modifications of the Green Drake of May and a Chocolate Drake; also a few duns, some stoneflies similar to Yellow Sally, and several large spinners.

July.—All the more abundant insects are small. Generally see but a few large stoneflies, that appear only on dull, cloudy days or late in the evening. The Orange Stone and Brown Stone are larger than the earlier stones. The Golden Drake, Pink-Tail Drake, White Miller, Red-Headed Black Gnat and a few of the smaller spinners are of chief interest.

The Coachman, being the best all-round artificial and at the same time one easily seen on and in the water, is used as a permanent tail-fly by many American anglers. Another good fly at tail or point, to which our British cousins are partial, is a small black one, as the Black Ant or Black Spider. The fact already has been noted that the cast alights better with the smaller fly for point, when using more than one

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fly. If the fish are very partial to a particular fly it may be good policy to put on two of the same kind, and the dropper (sometimes termed bobber) at least will part of the time be on the surface; if lake fishing and using three flies, use the same kind for stretcher (point, bottom or tail) and top dropper, with another variety for second dropper.

General Observations.—When you start fishing begin to ascertain by experiment which method is best for the present occasion—flies on surface and in constant motion or slightly submerged and given a few deliberate jerks between appreciable pauses, at each cast, and fishing the rapids or the swift- or still-water pools. The flies should be allowed not only to follow the natural trend of the current and eddies, as would a derelict insect, but should be cast also just at the outside edge of the swifter water. The submerged fly is indicated for flooded, discolored, rough or broken water. Dark hackles are good for cold, windy days. Toward evening on dark days try the Coachman, Quaker, Grizzly King, Seth Green, Silver Doctor.

Trout lie along the bank and both above and below rocks in the current out in the stream, in wait for food floating down; above, in the quiet space under the rock, between the dividing waters, is a favorite spot for brown trout. Sometimes it will happen in a stream that you

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will catch mostly brown trout on flies and in the pools, and mostly natives in the riffles and on minnows; or in a large pool, brown at one point and native at another; or some analogous phenomena.

Fish all large pools first from below, and then work toward the upper end; thus you can land fish from the lower end of the pool without spoiling your chances for other and perhaps larger fish at the upper end.

Keep quiet, as screened as possible, and the sun to your front or side, never behind you, else the shadow of self, rod, and line will frighten the fish. Tread lightly along the bank, and slide rather than step, in wading, to avoid vibration. Aim to have the leader—they call it a trace or foot-line, across the water—*straighten out in the air and the flies to alight gently as may be at each cast*; nothing is of greater importance than this. It is well also to keep the reel-line itself off the water *as much as possible*, which means the avoidance of unnecessary long casts. The angler never lived who could cast any length of line and have only his flies and leader touch the water; such instruction is but a sample of some of the outrageously impractical stuff that has been written to the confusion of the novice. A proficient caster does however get out an amazing amount of line at the same time succeeding in having his flies and leader

"Fish all large pools first from below." (No "sportsman angler" this, but a typical "real expert.")

Photo by R. Lionel De Lisser



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drop *before* the line rests on the water; this is something quite different. A short cast is one from twenty to thirty feet; thirty to forty feet is a medium cast; and forty to fifty feet is a long cast for actual fishing; and many more fish are caught with casts under than over forty feet.

South and West winds, between the new moon and the first quarter, and sky overcast and a slight ripple on the water—these always have been considered favorable conditions for lively sport. Moderate height of water should also be included. Under such circumstances the quarry may be expected to be feeding more industriously and to see the bait without seeing also the tackle and the “tackler.” Mr. Clapham, previously quoted, maintains that atmospherical pressure is the principal cause of bringing the trout to the flies—“to be precise, a sudden increase of pressure, as comes after a thunder-storm. The red-letter day comes only with a rapid increase of pressure, and the barometer is going up. It is very easy to verify this by keeping an eye on the instrument, and visiting the water when conditions are right. Sport is then certain, until the mean pressure is reached; after which things settle down again until the next atmospherical disturbance.”

We have not yet included a barometer in our angling equipment, and notwithstanding such astute observations we believe, whatever may

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be the weather portent, that a *hatch of flies* is the main thing to be alert for, such are the always delightful uncertainties of the sport which occasionally admit of taking trout on the fly during a snow flurry or a thunder-storm or in the full glare and heat of a midsummer's day. So the present writer holds with those who agree that the *best time to "go a-fishing" is whenever you can*, during the open season—which is little enough time for most of us, to be sure!—and that unless the weather be altogether outrageous it is the earnestness and persistence with which one fishes that most signifies. It is an old angling axiom that success is most likely to reward the fisherman who "keeps his line wet." Dr. van Dyke says that "What is called good luck consists chiefly in having your tackle in order;" and that "the trained angler, who uses the finest tackle, and drops the fly on the water as accurately as Henry James places a word in a story, is the man who takes the most and the largest fish in the long run."

Such, then, are some of the guiding cerebrations of practical anglers who really have consistently caught fish, and hence are entitled to be registered in the "sure-enough" expert class. But with all this lore, don't overlook that hint about opening the first fish caught, to see what kind of food he has just been re-

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galing himself with; for here literally is "inside" information. And this recalls the old-time theory that fish *always* swallow minnows head first, which received its first jar in the writer's mind when an angling friend informed him that he knew of several instances where autopsy revealed the presence within bass of smaller fish pointing t'other way. This was confirmed later by my own observation of a twelve-inch brown trout taken on the surface fly, and which contained *three* minnows, from two and a half to three inches long, in various stages of digestion and *all* of which had been swallowed tail first—or rather, two had been swallowed, as the one last taken previous to his striking the fly was still in his throat, which bears out the "fly for dessert" idea.

Most success will consistently be had by those familiar with their fishing place. If in a new locality and for a limited stay, the maximum of sport as measured by the actual catch will be obtained by following the advice of some expert native who knows the water—one of those interesting characters known to every angling hamlet who has a mysterious affinity with fish and a subtle understanding in regard to their capture. He fishes more in a month than most "gentlemen sportsmen" do in the course of a year. He knows what will prove the most taking lure and what is its best manipula-

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tion under the prevailing conditions of the water, season, and weather. He knows whether the fish are rising or deep feeding, where are the reefs and bars or other special feeding places, and he also knows the holes, alongside of rocks or logs or under the bank or among tree roots, where the particularly big ones lie. Not uncommonly they will lie in the same place year after year, and a good spot vacated by one fish will soon be occupied by another. Again, from changes due to freshets or to some other cause, the whole aspect and contour of the shore of a stream or lake will be completely changed at some particular spot. Or our native guide knows where the "big fellows" are because he has seen them feeding there, and the whole course of the creek is dotted for him with land- or rather, water-marks of likely places where previously he has raised fish but has failed to land them; he may even have netted them and then returned them to the water. This is the explanation of the seemingly occult performance of a "Herm" Christian or a "Bill" or a "Hank" or "Jim" Someotherbody, when he says nonchalantly: "Boys, watch me step right across thar and pull out a good one—right by that log," and straightway proceeds to do so, at the first cast. Perhaps it was only the previous day that he "riz" him at that identical spot, and that just prior to venturing the above remark

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his keen eye had detected the rise of the fish, by the circular rippling of the surface of the water, which informed him that he was just then on the feed.

One of the guild upon a time had under his convoy on the stream a New York "sportsman angler," who while braced midwater in a stiff current managed to attach his fly, in the back-cast, firmly to the hide of a red bossy browsing along the bank. As imported leader, flies, and finest of double-tapered lines began to disappear in the bush, he frantically yelled: "Hey! guide, I say! What shall I do, you know?" "Well," was the response, "I ain't no specialist in playin' keows; and I reckon ye had better cut the line if she don't break loose purty soon." The writer once, in attending to a companion's halloo from below him, turned and witnessed his freeing of a bird that he had hooked awing, and in the wing, while casting; and himself once played the maddest water snake on record, that he had hooked by the tail while it was sunning itself on a rock amidstream.

In concluding this topic we deem two incidents worthy of record, one as a pretty piece of scientific and persistent angling that met its due reward, the other as a specific example of the kind of entomological and piscatorial observation that goes to make one accomplished in the sport. On a certain well-remembered

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camping and fishing expedition the largest trout was caught by Dr. T—— on a number 12 dry fly, a Gold-Ribbed Hare's Ear. He was a beauty, just sixteen inches long and in prime condition. Said trout, who lay behind a certain log resting obliquely in about four feet of water, had twice run off with the Doctor's fly of the same pattern, the last time the previous day, but my friend was grimly determined to have that fish. The lusty warrior rose again to his fly only after fully three-quarters of an hour of almost continuous casting, was snaked out from behind his log, downstream, in jig time and shortly netted. The same lucky—or rather, more keenly observing and industrious—member of the outfit killed one evening, within two hours and two hundred yards from camp and with scarcely moving out of his tracks, eleven beautiful fish that measured from eight to ten inches. If you want to see the exact spot, note the pool along the bank, just below the rapids on the upper left side of the picture, as you look at the frontispiece illustration entitled "The beautiful Neversink."

My attention was attracted one evening on this same stream by the numerous flight of a blue fly over a considerable portion of the water. A couple of miles downstream the insect apparently did not appear, but the air was full of them at this point. They had about an inch

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spread of wing and a body approximately five-eighths of an inch long, with very long tail-stylets. The whole fly was of a deep blue. Native anglers, who told me that it was prevalent for about two weeks in June, called it the "blue grannom." Later I learned that a friend, Mr. Will L. Hall, a skilful and enthusiastic angler of Brooklyn who regularly spends a month or more on this stream, once remained an extra week for the express purpose of studying this fly, with the result that he believes it to hatch out only in very shallow water, which would not likely harbor any trout of goodly size, and that while over the water in dense flight for a season, he had not noted it *on the water*; for which reasons he regards the artificial as being of very little value.

But—observe, study, and contemplate as you may—as Albert Bigelow Paine plaintively laments in his inimitable *Tent Dwellers*,

You may pick your place—you may choose your hour—
You may put on your choicest flies;
But never yet was it safe to bet
That a single trout would rise.

And were it otherwise, angling for trout would be bereft of a vital part of its charm.

The Angler's Flies and How to Tie Them

A “RISE”

Under the shadows of a cliff,
Crowned with a growth of stately pine,
An angler moors his rocking skiff
And o'er the ripple casts his line,
And where the darkling current crawls
Like thistle-down the gay lure falls.

Then from the depths a silver gleam
Quick flashes like a jewel bright,
Up through the waters of the stream
An instant visible to sight—
As lightning cleaves the somber sky
A black bass rises to the fly.

ERNEST McGAFFEY

By courtesy of Mr. McGaffey

V

The Angler's Flies and How to Tie Them



After the angler has attained to some little skill at fishing with the fly—by far the most entralling branch of his artful recreation—and has made his own rod, yet he will not long be entirely satisfied without an attempt at the construction of these dainty imitations of natural insects, however crude may be his first attempts in this direction.

Call J. McCarthy of Chicago, a veteran practical angler, tackle-maker, and holder of numerous casting records, well expresses the feeling of many fishermen who have had wide and varied experience of fresh-water sport, when he says that the finesse obtained with fly-fishing is somewhat lacking in bait-fishing. "There is an indescribable sense of pleasure and satisfaction experienced by the angler when he has succeeded in gently placing a fly under an overhanging bush or tree, making it appear as if it had dropped therefrom, and his pleasures

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are largely added to should he be rewarded by seeing a swirl or feeling the tug of the line which indicates that he has by his skill deceived the wary trout or bass.

"Continued practise with the fly-rod in fishing develops the sense of touch to such a fine point that one can actually feel the hook entering the jaws of the fish, and when the gentle yet firm resistance of the hooked fish is at first felt one experiences the transmission of an exceedingly delightful thrill, such as cannot be obtained through any other medium. After the first few rushes and leaps of the fish are over, the angler becomes collected and settles down to give battle to the fighting beauty, knowing full well that one moment's forgetfulness on his part may mean the breaking of the delicate leader and the losing of the quarry. In rough waters, on a nicely balanced fly-rod of about four ounces, a trout weighing one pound is a hard customer to land and gives more fight than a fish weighing four pounds on a bait-rod. Owing to the very fine gut leaders used, one cannot force the fish, as is possible with bait tackle, and while there is a certain amount of anxiety felt during the process of playing him, and you give a sigh of relief when he is at last brought to the net or laid on the bank, you feel that a fish caught in this manner is worth ten via the bait route."

ANGLER'S FLIES AND HOW TO TIE

Superexcellence in the tying of artificial flies comes only with manual practise combined with a close study of stream insect life and of the habits of the fish that feed thereon. In fine it is a development coincident with the ripening of experience; and almost every expert tier has his own jealously guarded kinks or stunts both with reference to special technic and to the sources and utilization of special materials.

But it is possible that the reader may have less self-confidence than did that individual who, in response to one who inquired if he could play the violin, replied: "I don't know; I never tried;" and so, lest he should become discouraged at the start, we hasten to add that it really is a simple matter for the tyro to learn to tie flies that will be much superior in every way to the cheaper stock output of the tackle-shops, superior even to most of the more expensive grades of the commercial article. They will be better looking, will last longer—of course barring those irretrievably snagged or lost through breakage of leaders—and what is more to the point they will catch more fish.

We shall not attempt an exhaustive treatment of this subject, which in itself would require a large book, but we do intend to give such complete details and with such lucidity as will enable the amateur to make creditable flies, from which point by practise and observation

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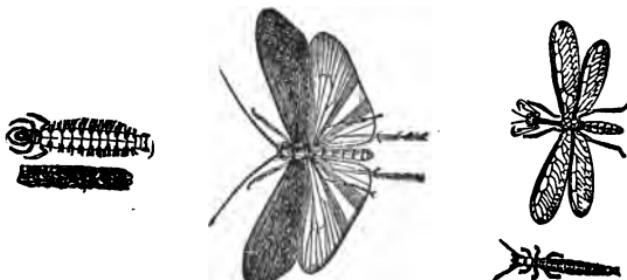
he may progress readily toward real expertness. And don't forget that if you want to know how any particular artificial fly is put together, you always can dissect the specimen; in this way many experts have begun.

At the outset you must be prepared to find that any list of "standard" artificial flies will reveal at once an unavoidably chaotic condition of affairs; and consequently that the phrase "true to pattern" becomes a very uncertain designation. In the first place many of the artificials are not even attempts at copies from nature, but are frankly empirical—"fancy" —patterns; in the second place those insects upon which the fish principally feed have been very little and very incompletely investigated by entomologists, with the result that they are variously named and classified. In short, *an exact scientific classification of either the naturals or artificials does not exist.*

This state of things naturally enough has given rise to all sorts of anomalies. For example, the angler will find both the March Brown and the Brown Drake listed in the artificial patterns, likewise the May-fly, Yellow May, and the Green Drake. Now the March Brown *is* a brown drake, and the Yellow May and the Green Drake both are May-flies. And the so-called "Spent Gnat" bears no relation to the gnats, but is intended to represent a drake or

ANGLER'S FLIES AND HOW TO TIE

May-fly as she lies exhausted on the water, with flat, outstretched wings, after having deposited her eggs. Again, no less an authority than William C. Harris noted not so many years ago in a list of artificials the Stone- or *Caddis-fly*. But the stone-fly is classed under the *Perlidae*, while we understand that caddis (caddice) is the name of a family of the neuropterous order of insects—the *Trichoptera*—whose larvæ, called caddis worms, look not unlike miniature hellgramites and emerge from cylindrical cases that are open at the ends. The



Caddis-fly (artificial case, larva, and imago) and another neuropterous insect

Cinnamon (also called Fetid Brown, from its odor) is a caddis-fly. It is useless to attempt to reconcile these irregularities and discrepancies; one simply must accept them.

Walton has a spirited description of various kinds of "Cadis—" or "case-worms," and tells how their artificial houses in which the creatures

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dwell may be "a piece of reed about an inch long," or "made of small husks, and gravel, and slime, most curiously made of these, even so as to be wondered at;" or, again, the envelope is fashioned of "little pieces of bents, and rushes, and straws, and water-weeds, and I know not what, which are so knit together with condensed slime, that they stick about her husk or case, not unlike the bristles of a hedgehog."

A fly that will not whip out easily is an expensive fly to buy, though generally cheaper in the end than those that do, and if in addition to durability it possesses the other cardinal features of seductiveness of form and pattern, then its cost mounts up accordingly. We know of one blue-blooded affair that after having caught nineteen good-sized trout was at last accounts still in good working order. These aristocrats among flies are tied only by expert practical anglers, and, when purchasable, from two to three dollars and more a dozen is not an exorbitant price to pay for them. The "25-to 50c.-per" kind are copied by girls more or less faithfully, at the rate of one in about every five minutes, from samples made by someone who really possesses some knowledge of the subject. Of course there are all grades, from the most haphazardly-slapped-together "bunches of feathers," up through some really good commercial specimens—generally made by members of some

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family that has been tying flies for successive generations—all the way to the delicate and highly intelligent handiwork that acceptably represents the pinnacle of the fly-tier's art.

As we already have stated, the common defect of most store-flies is that they are *too bulky*; notably in some Western sections of the country it is the regular practise of experienced fishermen to trim away most of the hackle, and first having split the wings, to cut off their upper halves. On the other hand, on certain swift rivers of the West large fuzzy flies (number 6 or larger, palmer tied) and frequently made with harness-felt bodies and bucktail, are used with notable success as floaters, and are often fished with two on the cast. And similar creations are not seldom killing when used on Eastern waters at night.

Body Materials.—Aside from the hook, which forms the foundation or skeleton upon which the artificial fly is built up, appropriate materials are required for imitating the body, wings, legs, and tails—caudal stylets—of the naturals. For the first, peacock herl from the bronze-green plumes of that bird, herl from dyed ostrich feathers, and various shades of chenille, silk-floss, and of crewel and other wools⁵ are used. In some brands the colors are shaded

⁵ Henry Hesse, 399 Sixth Avenue, New York, is headquarters for crewel and other yarns.

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from dark to light in the hanks, so that you can select any tint desired. Mohair or pig's wool, harness felt, silver and gold tinsel and fine wire, and raffia—a tough grass stocked by wholesale florists—also are commonly used body materials. Raffia bodies are quite durable, especially if varnished; raffia also keeps its color when wet, and wool better than silk, which darkens considerably. Strips split from straw, from dried corn husks or blades of grass have been utilized. (*Emergency flies* may be constructed of flower petals, birch bark, and bits of clothing, etc.) Horsehair makes a good ribbing, also winding for extended bodies, and the white may be dyed. Quill from the most delicate feathers is used to wind the very slender bodies of *quill-flies* or "quills," which steadily are growing in popularity. For this purpose the stripped peacock herl of an eye-feather, natural color, bleached, or dyed, is most highly prized, its half dark and half light coloration giving a very natural ribbed effect. Quill-flies take their names from the color of the hackle, thus, Ginger Quill, Red Quill, etc. Quill has been also selected for making extended bodies.

Some anglers are very partial to these detached or elongated bodies, which curve upward from the shank of the hook where it meets the bend, but I believe that in the experience of most who have used them they have been dis-

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appointing. If the fly-tier desires to make any of the *artificials* with extended bodies, *the drakes*—which include *the March browns*—should be so constructed, as the tail-ends of these naturals are cocked up most emphatically. The March- or large-brown category includes the March Brown, Turkey Brown, August Dun (drake), and Great Red Spinner—that is, these are varying forms of the same insect (not of the same individual insect) as it appears at different periods. A particularly suitable material for making these bodies, because of its color, translucency, softness, and flexibility, is delicate strips of crude rubber manipulated after the method of the late H. G. McClelland, a lamented contributor to the London *Fishing Gazette*, which will be detailed later on. And strips of vulcanized rubber cut from a very thin sheet and put upon the stretch have been utilized for covering colored bodies to impart a more natural appearance.

Wings.—But including the fashioning of the whole fly—body, wings, legs, and tail—there is scarcely a beast or bird of the field, or bird of the air or of the water, that does not pay tribute to the fly-tier. The quaint old poet Gay has put this prettily into verse:

To furnish the little animal, provide
All the gay hues that wait on female pride;
Let nature guide thee—sometimes golden wire
The shining bellies of the fly require;

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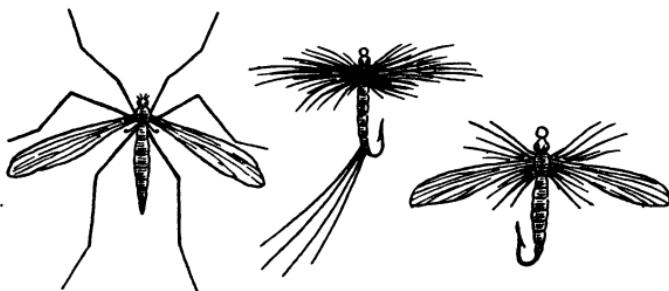
The peacock's plumes thy tackle must not fail,
Nor the dear purchase of the sable's tail.
Each gaudy bird some slender tribute brings
And lends the glowing insect proper wings.
Silks of all colors must their aid impart,
And every fur promotes the fisher's art;
So the gay lady with extensive care
Borrows the pride of land, of sea, of air;
Furs, pearls, and plumes the glittering thing displays;
Dazzles our eyes and easy hearts betrays.

Turkey tail-feathers, the plumes or breast- and wing-feathers of the swan, domestic goose, duck, and pigeon, the guinea-hen, wood duck, gray and brown mallards, heron, woodcock, quail, grouse or partridge, blue-jay, kingfisher, seagull, and starling are mostly in demand for wings. Feathers from *waterfowl* generally are preferred, but nearly all the varieties needed are obtainable from domestic hens, turkeys, pigeons, and ducks. On some flies whole small breast-feathers or the tips of small wing-feathers (as from the sparrow) are used for wings instead of strips cut out from the side web of the wing-feathers; and, again, the tips of small hackle-feathers are occasionally employed, especially for spinners.

For a *transparent substance* at once suitably delicate and durable, recourse is had to the scales of shad, pike, or herring, and to the splitting of certain quills, as that from the root of a crow's feather, to obtain their inner membrane;

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soaking in hot water facilitates this. As scales and quill will take a stain some extraordinarily fine results can be produced; manipulation of these materials in tying the fly is aided by softening the wing-ends in warm water. "Cello-silk," a product used for surgical dressings, much finer than the thinnest sheet celluloid, offers most interesting possibilities; it will stand sterilizing, that is boiling in water. (We



Natural and artificial spinners (middle fly represents a spent gnat)

wonder if anyone has experimented with tinted bond paper or genuine vellum, perhaps colored or mottled with a fine brush and the thinnest of oil colors and then dipped in collodion, marine glue, paraffine, linseed oil, or varnished!) Mr. McClelland has pointed out that newspaper print can plainly be seen through the wing-feather of a starling laid over it, and S. Howarth, quoting this, comments that no other feathers are so suitable for the wings of

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many small duns and spinners, number 12 or smaller.

In *handling fish-scales*, first sort them, discarding those too small or imperfect for use, and then separate the remainder into three classes, first and second selection and what is left. The largest and best formed will go into the A-1 class. They are readily sorted by picking up a mass of them with the left hand from a shallow dish of water in which they have been soaking (just water enough to cover them well), separating them by sliding between the thumb and fingers, and then by picking them up one by one with thumb-forceps and laying them down on a sheet of paper to dry. They will curl up in drying without pressure, but are easily flattened just before use by wetting them again and then re-drying between sheets of blotting-paper, with a weight on them, or by ironing them between cloths.

Harrington Keene even separated the delicate inner portion from the outer and hornier part of the scale and used that. (The late John Harrington Keene, noted American angling author, was born in England, his father being Queen Victoria's professional fisherman in Windsor Great Park.) Python scales have been used.

We illustrate a pike's scale in its natural shape, and indicate by the dotted lines how to cut and trim it with scissors for use as a pair of

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flat wings. And by superimposing one pair upon another you may make double wings. Cut away the outer two-thirds of the central part, but leave a bit projecting from the angle between the wings at the root of the scale, to bind onto the back of the hook shank in order to fasten them with added security. The winding-thread passes over this little tag and the shank and between and under the wings; three or four turns of the thread are also taken over the point of the wing-V in front of the wings, in finishing. The writer ties these flies most successfully by first catching in the hackle by its tip, then the tail-whisks (if any), next winding the body, after which the hackle is wound and the wings put on last. The second sketch shows how a pair of upright wings may be cut from a shad-scale for a dry fly. They fold together along the median line. (See next chapter for tying directions.)

Gauze wings are made from the most delicate fine-meshed gauze, stretched flat and glued over an opening cut in a stiff pasteboard frame. The outline of the wings to be cut out is then traced with a camel's-hair pencil, and veining may likewise be simulated, or imitated and the gauze



Pike-scale
flat wings



Shad-scale
upright wings

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reinforced by interweaving fine hackle or herl quills. One or more applications of a thin solution of varnish, marine glue, or of pure rubber dissolved in chloroform is then made to fill, stiffen, and waterproof the gauze.

Hackles.—True hackles, the long slender feathers with fine quill and stiff, readily-separating web, from high upon the necks of game-cocks preferably, are utilized for making legs, and a few fibers of hackle or other feather simulate the tail or caudal stylets. Horns or feelers may likewise be formed, and these latter sometimes with horsehair. Other than true hackles are sometimes used, notably saddle-feathers. Even the hackle-feathers of wildfowl, gamecocks, and bantams have more "pep" in them than do the hackles of the common barn-yard rooster, and that is why they are preferred—they stand out better. They also are more lustrous. As the reader shortly will note, the rich brown (chestnut) hackles, the color of those obtained from the Rhode Island Red breed of poultry, are most in demand. The cochy-bonddhu hackle, brown-tipped with a black center, is another particularly useful variety.

The following notes are from McClelland: Hackles are obtained in all shades from ordinary fowls; blue from Andalusians; white, cream, and yellow from Leghorns and Dorkings; buff from

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Cochins. They are best collected early and late in the year. Feathers from the cock are generally used, but some ginger and black ones from hens. Other sources of supply are the wren's tail, black plover toppings, the jungle-cock, and various game birds from which come honey duns, blue duns, stone duns, yellow duns, and excellent red ones from the grouse. From the partridge, speckled brown; from the snipe, golden. The dotterel supplies light duns and the starling, black. The darkest and glossiest red-brown from gamecocks are called "dark red game." The palest and most yellowish of the foxy reds are called "ginger." "Dun" means a dingy brown or mouse color. Of the combinations, "badger" is one with a black or dark dun center and a white or creamy edge. "Honey duns" or "brassy duns" have a dark dun center and a honey yellow edge. The "furnace" has a black center and edge with dark red between; in a "white furnace" the white replaces the red, etc. A "grizzled" hackle is one in which light and dark are evenly mixed.

Emerson Hough expatiates on the killing qualities of the *bucktail-fly* for trout—and big ones—in high and discolored water. He says it seems to work anywhere, and that in the Arctic Circle, three thousand feet above the country where he first saw it used, the contrivance kept the camp in trout and grayling

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for weeks. It does not look like any insect in the world, and the ruder and coarser the fly the more successful it seemed.

He ties it on hooks much larger than the size appropriate for the ordinary artificials in a given locality, and the color does not seem to make much difference. Sometimes he makes the body of the deer hair, with "wings" fashioned by bending the hair back at the neck. Again the body and wings are made separately. He rather favors a body of the white hair with wings of mixed gray and white or brown and white. Or the body may be of herl; but he thinks the fly of all deer hair is better. There is no hackle "except by accident," and the wings are never set upright but are kept low. The important point about the wings is not to crop the crinkly ends of the hair; deer hair does not mat down in the water but spreads out, and it is this life-like crawl of the long hairs as they move through the water that constitutes the deadliest quality of the bucktail-fly. This fly is most effective when "pulled up or across stream in a series of short jerks, a foot or more at once, then letting it drop back just a little."

A more or less complete assortment of these *fly-tying materials* is kept in stock by the larger tackle-houses.⁶ But it is no little fun to collect

⁶ We have obtained materials from C. H. Shoff, 405 Saar Street, Kent, Wash., and from the Mole Fly Company, Roosevelt, N. Y.

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them, and to sort them out into envelopes, which "junk" you may conveniently store away in one of the domestic tin bread- or cake-boxes, for protection against moths. The ventilating holes should be covered on the inside with surgeon's plaster. The jeweler's, art-embroidery



Work-table, fly-tying tools, and storage box for materials

counters (that at Gimbel's in New York repays investigation), and firms making a specialty of uniforms and regalia are fruitful sources for some things, and rich hauls are sometimes made from discarded millinery. (We forget who is that writer who tells about the spiritual benefit of the church service being nullified for him be-

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cause of the feathers on the hat of the woman in the seat ahead that he coveted.) Anent the hackle quest, do not neglect to investigate the stock of Japanese feather bric-à-brac dusters which you can locate in the housefurnishing-goods section of the large department-stores. That is, you can locate them at times; sometimes they are out of them; again, for a period, a good supply will be carried, both in dyed feathers and in a nice variety of natural colors. Turkey-feather dusters are always on hand, and those made of ostrich feathers are also a stock commercial article. White duck-wing *feathers* may be colored to almost any desired shade by the use of "Diamond" or "Putnam" household dyes from the drug store—use those for silk; so may white (Leghorn) hackles; and albeit some anglers deprecate any use of stained feathers they seem to work out pretty satisfactorily. For drying out feathers after dyeing, Keene suggests shaking them up in a paper bag in which they have been heating in the oven for a time, and of course carefully watched.

The natural oil should be removed from all feathers before dyeing; to do this, tie into small bunches by securing at the butts, wash thoroughly in warm soap-suds to which a little soda has been added, rinse in clean water, and then place in a hot solution of alum and water.

Mr. James E. Stevens of Kansas City, Mo.,

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writes *Forest and Stream* that a more simple and at the same time a very effective method of staining feathers is by the use of the tube oil-colors put up for artists; only a few drops of the paint being required, mixed with a little gasolene. "Any shade is possible by blending the colors and a feather dipped in this gasolene solution is permanently colored and can be used as soon as the 'gas' has evaporated."



Small-mouth black bass, 23 inches. Author's catch and mount

By exchanging with other anglers feathers, etc., from your surplus stock you shortly may acquire raw materials sufficient to make up enough flies to last your natural lifetime.

Bass flies may be said to be big trout-flies, though there are many special and erratic patterns, they oftener are made with cork bodies to float them, and though larger ones than are necessary are frequently used. We are not now referring to feathered lures that are intended as imitations of minnows rather than of flies,

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either real or fancied. A smaller variety is needed than is found useful in trout fishing. Numbers 4, 5, and 6 will do nicely for general work, and at times those as small as number 10 may be very successful, notwithstanding that both large bass and trout are not rarely caught at night on flies as gigantic as any ever used for salmon, fished wet. Hair from a deer's tail (the genuine bucktail product—fox- or squirrel-tail hair is inferior) is also a component part of some of the most killing of bass patterns, and in addition these are popular: Red Ibis, Parmachene Belle, Dark Montreal, Royal Coachman, Bluebottle, Brown and Gray Hackles, Jock Scott, Silver Doctor, Grizzly King, Professor, Ferguson, Lord Baltimore, Governor Alford, Colonel Fuller, Babcock, Butcher. In the subsequent descriptions of the patterns of the most commonly used trout flies, the following ten are not listed:

(Note.—When the *tail*—caudal stylets or *whisks*—of an artificial fly is not specifically noted as being made of *hackle*, it may consist of delicate strips of some other feather and usually coarser than *hackle-fibers*.)

JOCK SCOTT (much diversified):

Wings, mixture of yellow mottled and gray mottled, with scarlet and yellow mid-strips outside, and jungle-cock and blue shoulders;

Body, anterior half black, outer half yellow with black tip, and whole ribbed with white silk;

Legs, mixed black and mottled black and brown *hackle*;

Tail, yellow with scarlet root.

(This is also a famous salmon fly.)

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FERGUSON (diversified):

Wings, mottled brown and black (turkey) with mid-strip of yellow outside;
Body, yellow ribbed with silver tinsel, and black herl head;
Legs, light green hackle, sometimes tied palmer;
Tail, scarlet and yellow, with peacock sometimes.

LORD BALTIMORE:

Wings, black with jungle-cock shoulders;
Body, orange ribbed with black silk; Legs and Tail, black.

GOVERNOR ALFORD (diversified):

Wings, drab (front or uppermost of each wing) with cinnamon under-wing;
Body (corpulent or moth), green herl;
Legs, brown hackle with black root; Tail, scarlet.
Or

Wings, front half black, posterior half brown;
Body, green herl; Legs, brown hackle; Tail, scarlet.

COLONEL FULLER:

Wings, yellow with scarlet shoulders;
Body, yellow ribbed with silver tinsel, and black herl head;
Legs, yellow hackle; Tail, black.

BABCOCK:

Wings, yellow with outer black mid-strip;
Body, scarlet ribbed with yellow silk, and black herl head;
Legs, black hackle; Tail, black and yellow fibers.

BUTCHER (three patterns):

Body, scarlet ribbed with yellow;
Legs, yellow-green mottled;
Tail, scarlet hackle. This called *Light Butcher May-fly*.
With
Body, scarlet ribbed with red-brown; Legs, gray mottled;
Tail, brown hackle; this pattern called *Dark Butcher May*.

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With

Body, green herl; Legs, scarlet hackle wound palmer; the pattern is called *Scarlet Butcher*.

(Hackle on all these Butchers is very long and bushy. The Butcher *salmon fly* is an altogether different pattern.)

One SPECIAL PATTERN personally known to the writer to have been used with much success, has:

Wings, extra long and set upright, of white deer-tail with gray mottled (wood-duck) shoulders (these erect wings bend down and trail beyond the hook when fly is drawn through the water);

Body, white or yellow chenille ribbed with scarlet;

Legs, white deer-tail or hackle; Tail, scarlet.



An effective bucktail bass-fly (the Christian, "special pattern" of above list)

ANGLER'S FLIES AND HOW TO TIE

Scarlet, white, yellow, brown, and black flies are notably good colorations in bass lures of this class, and their efficiency is sometimes enhanced by the addition of small spoon (*spinner-fly*, but the term bears no relation to the natural flies called spinners) attached in front of the head, and by a thin strip of pork-rind, about one and one-quarter inches long, fastened in the bend of the hook. Spoons are especially enticing to pickerel, pike, and maskinonge.

Fly-fishing for bass is, as a rule, less available and less successful than for trout. Some of the best is to be had in the flowing waters of certain of the Southern States, and the upper Mississippi is a famous locality. The foregoing modifying sentence was added after receiving a most interesting letter from Dr. J. E. Storey of Beaumont, Texas, prompted by his perusal of this fly-tying chapter when it was running in serial form in *Forest and Stream*. This genial sportsman furthermore forwarded to me for examination fourteen of his "pet bass-bugs," the result of his own clever handiwork. Three are excellent imitations of a cricket, locust, and a beetle, having cork bodies coated with black varnish, and most of the others are varied bucktail patterns.

Dr. Storey wrote that his samples are all proven killers, the floaters, bucktail or otherwise, more deadly than the under-water pat-

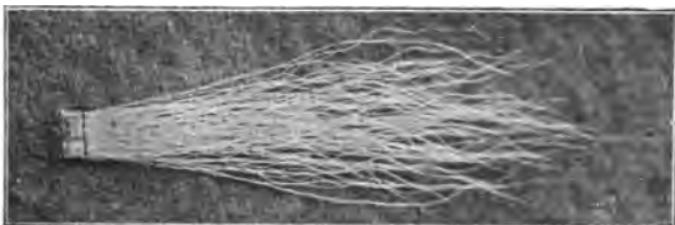


Some of his "pet bass-bugs," dressed by Dr. J. E. Storey
(Five-sevenths actual size)

ANGLER'S FLIES AND HOW TO TIE

terns. "I have fished the mountain streams of the West for trout, but I must say the bass of this section are far ahead of anything I have ever seen when it comes to taking the fly. I have often seen as many as half a dozen running a hooked bass, so I think that anglers who believe trout are more eager after the fly never had the pleasure of trying for them in clear running water, but had confined their activities to some inland lake where the game is sluggish and the sport tame."

Also included in the Storey exhibit was a little bunch of deer hair ingeniously held to-



Preliminary control of deer hair

gether by a tiny piece of surgeons' plaster, which the maker explained was his method of controlling the hair until he had made the tie.

A cork-bodied floating grasshopper that is on the market has a good reputation for being attractive both to bass and large trout. For these "exact imitation" artificials, as differentiated

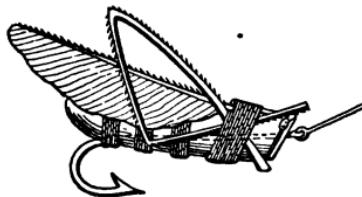
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from what may be termed suggestive or typical fly-patterns, fine hackle quills or mid-ribs and silkworm-gut are frequently used for making legs. A notably fine specimen of this type of lure is the dragon-fly as dressed by Mr. Noa Spears of

San Antonio, Texas.

The wings are of deer hair and tail of the hair supported by three or four pieces of bristle, both colored dragon blue. The segmentation of

the tail is indicated by narrow black silk bands. This artificial is much lighter than most of its type, casting nicely with a long rod, and the tail



Floating grasshopper



Mr. Spears' dragon-fly (three-fifths actual size)

ANGLER'S FLIES AND HOW TO TIE

sinks very naturally as the fly rests upon its outstretched wings on the water. The cork body is blue with fine black mottling. Mr. Spears dresses it also in other colors in copy of other local varieties of the insect. He writes: "In fishing them proceed very slowly, simply letting them lie or float with little or no movement. So fished, they will attract both bass and perch. Shallow lakes, quiet days, and sluggish streams will prove best for them."

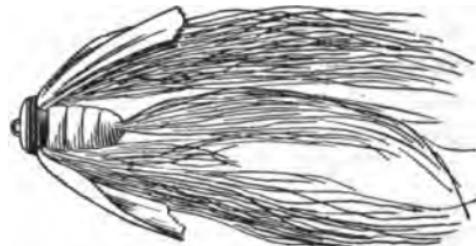
Before dismissing this branch of our subject it should be noted that what appear to be the most successful "flies" used for this bass fishing are a very recent development, and that they are more unlike any natural fly than the most bizarre of the old-time artificials. Mr. B. F. Wilder, of New York City, seems to have been prominent among the first anglers to use and introduce the innovation, and Mr. Wilder says that in June, 1914, on a trip to Belgrade Lakes, Mr. Louis B. Adams, likewise a New Yorker, gave him the first "floating bug" he ever saw, a fly of his own tying, and that so far as Mr. Wilder knows, Mr. Adams—who told him he had great sport with the lure during previous seasons—is the inventor of this splendid addition to the pleasure of the bass fisherman.

These nondescripts really belong in a class by themselves, and this is recognized in their popular designation as bass "bugs." The under-

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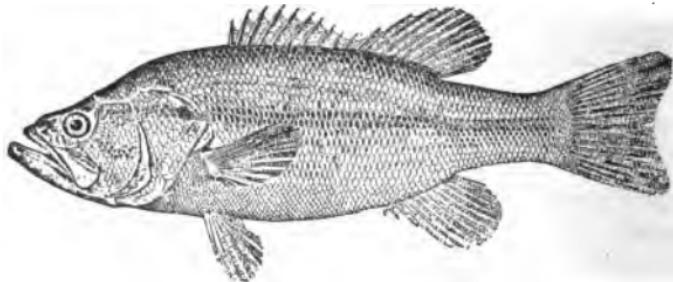
water ones, tied on hooks as large as number 4/0, might more appropriately be termed "dressed minnows;" the cork-bodied floaters are mostly vari-colored combinations of bucktail and

feathers, of the basic pattern as here pictured in top view, and are tied on hooks of about 1/0 in size. Some bodies are



Type of modern floating "bass-bug"

left in the natural cork; others are painted with dry colors mixed in shellac. In *much-fished* waters they are more successful *at night*, which likewise is true of any other lures used in these localities.



Large-mouth (Oswego) black bass

The small-mouth black bass (*Micropterus dolomieu*) has smaller scales than the big-mouth

ANGLER'S FLIES AND HOW TO TIE

or Oswego (*M. salmoides*) and the angle of its jaws does not extend *behind the eye*; the Oswego's smile reaches pretty nearly to the back of its neck. Black bass are valiant fighters and great jumpers on the line when hooked, and the



Photo by A. Radclyffe Dugmore

Leaping bass (the maximum height reached above water
being about 28 inches according to Dr. Henshall)

distance they are able to reach above the water has been greatly exaggerated. On the authority of Dr. James A. Henshall the extreme limit is little if any more than twenty-eight inches.

Salmon fishing is largely restricted to the few who can afford it, most of the productive salmon waters being preserved or necessitating a long

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journey for the great majority of anglers to reach them. Ofttimes both is the case. Nova Scotia perhaps affords the most available of this fishing for most anglers.

The salmons, with the exception of the ouananiche (win-na-nish)—“a fierce-fighting, prodigious-leaping fresh-water and smaller understudy of the Atlantic salmon,” often inaccurately termed “landlocked”—migrate periodically from river to the sea, and back again for the purpose of reproduction. The ancestral home of the ouananiche is Lake St. John in the Province of Quebec. Some there be who will tell you that the absolute quintessence of angling enjoyment is afforded the expert in the attempt to land this little salmon from swift water on a *barbless fly*. Dr. van Dyke has thus apostrophized him for all time:

“Here let me chant thy praise, thou noblest and most high-minded fish, the cleanest feeder, the merriest liver, the loftiest leaper, and the bravest warrior of all creatures that swim! Thy cousin, the trout, in his purple and gold with crimson spots, wears a more splendid armor than thy russet and silver mottled with black, but thine is the kinglier nature. His courage and skill compared with thine

‘Are as moonlight unto sunlight, and as water unto wine.’

The old salmon of the sea who begot thee, long ago, in these inland waters, became a back-

ANGLER'S FLIES AND HOW TO TIE

slider, descending again to the ocean, and grew gross and heavy with coarse feeding. But thou, unsalted salmon of the foaming floods, not land-locked, as men call thee, but choosing of thine own free-will to dwell on a loftier level, in the pure, swift current of a living stream, hast grown in grace and risen to a higher life. Thou art not to be measured by quantity, but by quality, and thy five pounds of pure vigor will outweigh a score of pounds of flesh less vitalized by spirit. Thou feedest on the flies of the air and thy food is transformed into an aerial passion for flight as thou springest across the pool, vaulting toward the sky. Thine eyes have grown large and keen by peering through the foam, and the feathered hook that can deceive thee must be deftly tied and delicately cast. Thy tail and fins, by ceaseless conflict with the rapids, have broadened and strengthened, so that they can flash thy slender body like a living arrow up the fall. As Lancelot among the knights, so art thou among the fish, the plain-armored hero, the sunburnt champion of all the water-folk."

This ability of salmon to surmount falls of a considerable height in their ascent of rivers to spawn never fails to incite the wonderment of the observer. In some instances they accomplish a clean jump through the air of over twenty feet in the opinion of Dr. Robert T. Morris, who measured an eighteen-foot leap, and

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through whose courtesy we present reproductions of photographs of such a leaping salmon in the falls, and of an Atlantic salmon (*Salmo* *salar*) and a sea-trout side by side. The latter



Leaping salmon in the falls

shows the enormous caudal fin of the salmon that explains how it can make leaps that are so much longer than those of the trout. For the salmon of the picture a jump of at least twelve feet was required to ascend these falls of the White Bean River in Labrador. The

ANGLER'S FLIES AND HOW TO TIE

other principal species of salmon is the Pacific, chinook or quinnat. A young salmon fresh-run from the sea is called a grilse, and a spent salmon is a kelt or "slink."

Salmon flies are never like unto anything in the air above or waters beneath; they frankly are "fancy" creations, in which jungle-cock and golden-pheasant feathers are most killing factors, and so much diversified that there is no absolute standard for scarcely any of the patterns. Says Edward A. Samuels in his book on salmon fishing (*With Fly-Rod and Camera*): "At one time I had upward of four dozen Silver Doctors in my books, that I had gathered here and there, and hardly two of them were alike. If the body is of pure silver tinsel it matters little how the rest of the fly is made." Durham Ranger, Jock Scott, Butcher, Nicholson, Popham, Black Dose, Royal Coachman, and Fairy are others that are standard.



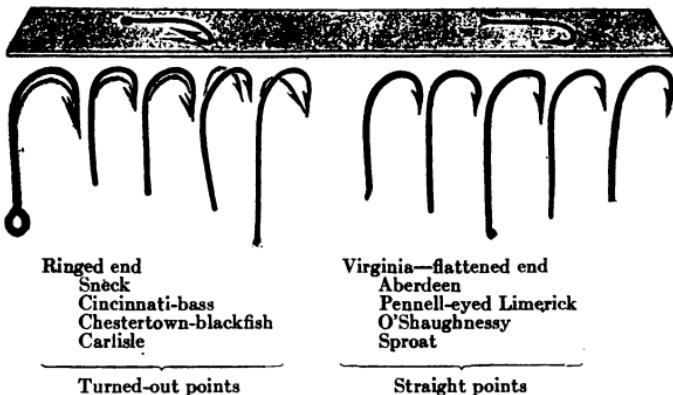
Sea-trout and salmon

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While the salmon angler has much to learn before he can make a success at trout fishing, the accredited trout fisherman will quickly acquire the details of the former's art.

Hooks.—The angler's fishhooks are made in various styles, according to the weight of the steel wire and the particular form of the bend

VARIOUS HOOK STYLES



employed, and are thus named Sproat, Snek, Limerick, etc. They also are made either eyed or snelled, the latter having a short length of looped silkworm-gut bound onto the eyeless shank; though some makers are putting out flies on eyed hooks fitted with snells or snoods. Salmon flies more especially are often made with a small gut loop at the head. The flytier will buy his hooks loose, and advantageously

ANGLER'S FLIES AND HOW TO TIE

in packets of a hundred. Eyed hooks, fastening directly to the leader, are preferable for making flies because a well-made fly will outwear its gut attachment. The author is one who prefers those with eyes turned *down*, to the upturned-eye pattern, believing that a more direct pull is thus assured. Some hooks, Sneck for example, have their point deflected to one side; others, as the Sproat and Limerick, have the point in the same plane as that of the shank, and when laid upon their side on a flat surface will touch it throughout their whole length.

For dry flies we pre-

fer this style. A

1

2

3

4

5

floating-fly hook should have no unnecessary weight, consequently it should be made of

14

13

12

11

10

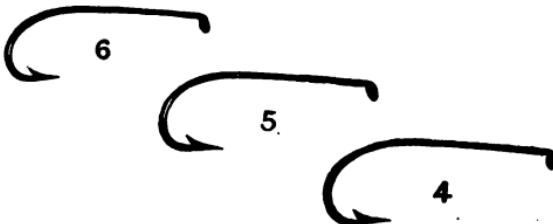
Two styles of Pennell Limerick hooks

wire as light as consistent with the required strength. All of these desirable qualifications are fulfilled in the hook known as the Pennell down-eyed Limerick, and the most useful sizes of these for tying trout flies are numbers 10 and 11 ("new style" numbers 5 and 4). They are all right too for wet flies. Should you prefer to tie flies with curved bodies, you can use a modification of the same pattern which has an *upturned shank*. For the largest bass

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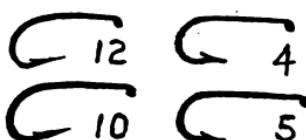
flies restricted to fishing wet, you can use Sproat hooks; which do not differ much from the Limerick pattern but are made of heavier wire. Get any of these in the bronzed finish.

There is one style of hook that the writer



Sproat hooks

prefers to the down-eyed Limerick, and that is what is known as the Model Perfect hook, and it is made by S. Allcock and Co., in Redditch, England. It has a rounder, wider bend than the Limerick, and this extra space between point and shank allows of a bigger bite and a surer hold; it also has a very long, slender, sharp point, and the shank is nicely *tapered*, in the particular pattern we are noting, just before it terminates in a very



Model Perfect and Captain Hamilton hooks

neat downturned eye. On the whole it is light and very graceful, at the same time strong enough and very effective. A somewhat similar

ANGLER'S FLIES AND HOW TO TIE

pattern is stocked by Hardy Brothers of Alnwick, England, under the name of the Captain Hamilton hook, numbers 4 and 5 in this brand being the best sizes for all-round use.

Tools.—The tools required in fly-tying are few and simple. They include a small—pin—vise which may be obtained of a dealer in jewelers' tools at a cost of about fifty cents. Get the kind in which the jaws are set by a thumbscrew. This you can attach to your work-table by means of some simply devised standard and a clamp. The horizontal position of the vise best facilitates the work. (Some professional tiers do without the vise entirely, holding the fly between thumb and forefinger throughout the whole operation.) In addition you should acquire a pair of sharp nail-scissors with long slender curved blades and sharp points; one or two pairs of hackle pliers, easily fashioned from spring steel or tempered brass wire of about an eighth of an inch in diameter or less; a bodkin or stiletto, made by thrusting the butt end of a darning needle into a slender wooden handle; and some special wax for waxing the tying- or winding-silk, to be had of the tackle-man for five or ten cents. Some use ordinary shoemakers'-wax, both dark and light, applied from be-



Hackel-pliers (half actual size)

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tween a leather fold; better is this combined with an equal part of beeswax. For the tying-silk itself you need gossamer-fine silk thread, number 00, or better, 000, in brown, white, or black; the first is about the best all-round color though the white will wax to a brownish hue. (Obtainable at Stern Brothers, Forty-second Street near Sixth Avenue, New York.) You can use a single strand of the common A silk or split even the fine thread, but for the new species of bass bugs, etc., the whole A silk is not too coarse.

We are now quite ready to proceed with the business of the actual tying of flies, and to this we will devote our attention in the next chapter. You will find it a distinct advantage if first you arrange some cloth or paper for a white background.

The Angler's Flies and How to Tie Them

(Concluded)

SPRINGTIME IS COME

Now, when the first foul torrent of the brooks,
Swell'd with the vernal rains, is ebb'd away,
And, whitening, down their mossy-tinctured stream
Descends the billowy foam; now is the time
To tempt the trout. The well-dissembled fly,
The rod fine-tapering with elastic spring,
Snatch'd from the hoary steed the floating line,
And all thy slender watery stores prepare!

THOMSON'S *Seasons*

VI

The Angler's Flies and How to Tie Them (Concluded)



LIES are tied or dressed to a distinctive style according to whether they are intended for *dry flies*, *wet flies*, or for *huckles* or *palmers*. The latter two are *wingless*, as they represent the creeper form of insect life which, in the case of aquatic flies, lives under the surface of the water preparatory to its transformation into the winged state; consequently such artificials are principally intended to be fished wet—though they may be fished dry—and are adapted especially for such time when the fish are not feeding on surface insects. A *palmer-fly*, so named from the palmer-worm or caterpillar, is a wingless one with the hackle wound the entire length of the body; a winged artificial with “legs” extending the whole length of the body is said to be palmer-hackled or to have the body dressed “palmer” or palmer fashion. Thus the larvæ of land flies

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also may be imitated, as in Brown Palmer artificial which is supposed to represent the common brown caterpillar.

Not all tiers tie their flies in the same sequence of construction, in making the body, wings, legs, and tail, and there are diverse opinions also as to the most effective wing positions for individual patterns. Indeed flies have been made with the wing-tips pointing toward the eye of the hook, instead of toward the point which is the usual custom; these are called "fluttering" flies, as the wings tend to open and shut when drawn through the water. In "matched-wing" flies, two feathers of the same size are matched and then tied on after the body and hackle are in place. But all this does not matter; having once mastered any method the amateur tier is in possession of the fundamental principles and will be fully competent to vary the order and other details to suit his own later inclination or ideas.

Because *dry flies* are the harder to tie, and because the wings are usually the most difficult part of a fly to construct, we will start with the tying of a dry fly, and we will put the wings on first; then all the rest will be so much easier. There are other, special advantages of first tying the wings in the popular form of dry fly, as you will presently perceive.

The proceeding divides itself nicely into

ANGLER'S FLIES AND HOW TO TIE

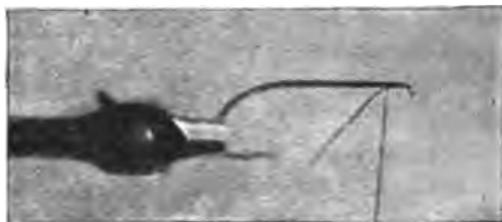
twelve cardinal steps, which we have illustrated from photographs of these actual consecutive stages. (In order to obtain greater clearness of detail the flies were tied on number 2 Sproat hooks and photographed full size. These copies were reduced in reproduction, but the cuts still depict flies considerably larger than those most favored in trout fishing.)

1.—Fasten hook in vise, at the bend, as shown. Wax about a fifteen-inch length of tying-thread.

(The McClelland recipe for wax is equal parts of resin and turpentine, mixed by placing the container in boiling water; then pour into collapsible tube. J. Harrington Keene's formula has been printed as follows: Burgundy pitch, 480 grains; light resin, 240 grains; mutton-tallow, 96 grains. First melt pitch and resin together, then mix tallow in thoroughly; pour into a dish of water and pull like candy, then lay on a piece of greased glass to cool. Cut into small pieces and roll in paraffine paper. Keep a small working bit in a folded piece of old kid glove. But in the third edition of Keene's *Fly-Fishing and Fly-Tying*, 1898, the formula is given thus: white resin, four ounces; fresh lard, one-half ounce; white wax, one-quarter ounce. Melt resin, add wax and lard, let simmer for quarter of an hour, then pour into cold water and pull, etc.)

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2.—Starting just a little space behind the eye—to leave room for the hackle—catch end of thread under (“thread” means your tying-silk) and take four or five turns around the shank, winding away from you and making close turns toward the bend of the hook. Cut off close short end of thread.



Steps 1 and 2

The tying-silk must be wound *as tightly as it will stand* without parting, and a handy arrangement for catching and holding taut the thread at any time you wish to drop it is the following: Between the legs of a common wooden clothespin jam a piece of rubber from the front side of which you cut out a V-shaped piece, and then further make a cut into the angle of the notch to correspond with the leg of a Y. Bore a hole in the front of your workbench which will take the clothespin snugly, and into which you insert it head first. Or it may lie on top of a table, projecting a little beyond the edge, to which it is clamped under the end of the vise. When you want to relinquish the thread temporarily catch

ANGLER'S FLIES AND HOW TO TIE

it in this rubber slit. No knots are made in the tying-thread—excepting possibly a single half-hitch the better to hold the work at some critical stage—until it is permanently secured when the fly is completed; it is “carried along” with the progressive manipulations of the other parts of the fly all the way to the finish.

A dry fly in the Halford pattern (split-winged) differs mainly from a wet fly in the *style of the wings*; its wings are *double*—there are four, two on each side, one superimposed upon the other; they curve or flare out, having their convex surfaces facing each other and toward the body of the fly; and they are set *upright* (cocked-winged) or inclined a little forward, toward the head of the fly (eye-end of the hook).

3.—If you make the wings from strips taken from a feather of the first shape pictured, you may cut them from both sides of the same feather, a pair of strips for each double-wing from each side; but if from a feather of the second shape shown—the shape of the long wing-feathers most widely used—you must get your strips from corre-



Clothespin
thread-holder

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sponding sides of matching right and left wing-feathers; for one fly-wing must have a curve and flare exactly *corresponding* to the other, not the same but just the *opposite*; and the wings must be of equal length.



Step 3. Cutting wings

In cutting out strips, one-eighth of an inch will be about the right width for a number 10 or 12 fly. Separate them from rest of feather web with the point of a penknife blade carried edge first from the quill outward and upward between the fibers; or you can use the bodkin point. Now scissor them free at base, close to the quill. The proper distance for the wings to extend above the body (shank of the hook) in

ANGLER'S FLIES AND HOW TO TIE

order to attain a well-proportioned fly, is exactly the *overall length of the hook to which the fly is tied.*

4.—Cut four strips of wing-feather for wings and pair them, exactly overlapping; pick them up between left thumb and forefinger; place them in position on back of hook, a pair of the lower ends projecting a little below the shank on each side of the hook, where the tying-thread stopped; secure with a few turns of the thread in front of the wings.

(Follow corresponding maneuver for attachment of a single or double pair of shad-scale wings, but first catch in hackle butt under the wings. In making especially the first of these turns throw the tying-thread over the feathers loosely and *do not pull tight* until the end is carried well over, away from you, and around shank; then pull snugly directly *down*. Otherwise you are likely to twist the feathers over toward the far side of the shank. To further offset this twisting of the wings around shank before they are firmly secured, hold them *twisted a little toward you*



Shad-scale upright-winged dun,
tied by author

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as you are pulling this first loop of the thread taut.)



Step 4

5.—With right thumb and forefinger (or middle-finger) turn back toward hook point the ends which project below the shank and then hold them with the corresponding left fingers; catch with a couple of turns of the thread *behind* the wings. Tension on ends as you fold them



Steps 5 and 6

back pulls upper ends of wings *forward*, and the turns behind also pull them into and hold them in position wanted. (The curved-end dental thumb-forceps is helpful here, and long fore-

ANGLER'S FLIES AND HOW TO TIE

finger- and thumb-nails are an asset for this as for other manipulations. Many tiers cut off these projecting wing-ends, without thus turning them back, but this construction is not nearly so durable.)

6.—With scissors cut off at a bevel the turned-back wing-ends (dotted line in illustration), and catch them in with thread.

7.—Strip the down from the butt of a hackle-feather. With two or three more turns of thread secure the hackle at the cleaned butt end,



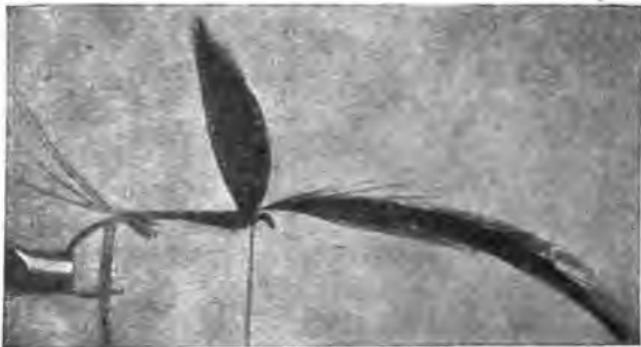
Step 7

placed on top of shank with quill lying between the wings, the tip directed away from the hook and with the outer (darker and glossier) side of hackle facing you; that is, the hackle may stand on edge (perpendicular plane), and in working away from you this brings the bright side to the front, or toward eye of hook. Carry

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thread in long spirals down to where shank joins bend of hook.

8.—Lay four fibers of hackle (some say two or three and others use five or six) or other selected feather fibers on top of shank where it joins the bend, and overlapping shank about a quarter of an inch; catch these tail-stylets with a couple of turns of thread; carry an additional



Steps 8 and 9

turn *behind fibers to cock them up.* (The exact place of attachment of the tail-whisks, which marks the extent of the body, is a point opposite to midway between the barb and point of the hook.)

9.—Lay on piece of body material similarly and secure end; cut off surplus short end (in making full bodies wind two strands at once and loop it around thread to catch it in at the start); carry thread in long spirals back to wings

ANGLER'S FLIES AND HOW TO TIE

and with the next turn *pressing against back of wings pull wings up and well forward to desired position*; make the next turn in front of the wings, then two oblique (X) turns around shank and *between wings*, thus making their position more secure and *spreading them slightly*.

10.—Wind body material around shank up to wings, and by *forcing it up against back of wings further brace them in their upright-forward set*; secure with thread; cut off surplus body material.

11.—Catch the point of the hackle with pliers and wind it on, *on edge*, and with a slight twisting manipulation, first to the left then to the right, to cause the fibers to stand out nicely, watching the upper fibers toward hook shank to see that they are not wound under and releasing them when required with the bodkin point; make most turns of hackle in front of wings, two *between* if you wish to further spread them, and maybe one behind. Secure end of hackle with a few turns of thread, perhaps adding a half-hitch; cut off surplus.



Step 10

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(Many prefer the hackle entirely in front of the wings; it is *not laid back* toward the bend of the hook, but is allowed to stand out in all directions as it naturally will.)

12.—Fasten thread with three half-hitches just behind eye of hook, or better, with an invisible knot of three or four close turns, working toward the eye and over the end which you have doubled back and laid under these coils parallel with shank, as shown in the illustration (A winds over and secures B). Hold loop of thread taut over point of bodkin and pull end of thread till loop hugs needle; withdraw bodkin, give a final firm and steady pull to make all secure and cut thread off close with a sharp penknife, being careful not to cut the hackle. With bodkin pick out any fibers remaining caught under turns of hackle or of thread. (Some tiers split the hackle through its quill and use a half-hackle to mitigate this difficulty; but this seems rather adding an unnecessary difficulty.



Step 11

ANGLER'S FLIES AND HOW TO TIE

A much simpler stunt is to strip the fibers from one half of the feather.)

Put a drop of white shellac from the small end of a toothpick, or a similar sliver of wood, on end of winding to further secure and to waterproof it. (A good plan is to keep a little



Step 12

varnish in a corked vial, and to have a toothpick inserted into bottom of cork.) Spar varnish does not dry so quickly as shellac, but is better protection. In either case avoid obstructing the eye of the hook. And—eureka! your fly is finished.

A friend in a rare moment of supreme confidence ('tis thus, one by one, that most of these little kinks are acquired) has revealed to me his "lazy-man's trick" for facilitating the

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tying of the invisible finishing-knot at the head of the fly. He folds a little strip of stiff paper, cuts a tiny nick at the middle of the fold, and first passing the tying-thread through this hole, then places the hole over the eye of the hook, the paper thus serving as a retractor to hold the hackle and wings back out of the way. Rather neat, isn't it?

The *wings of a standard wet fly* are made of a single pair of feathers or strips; they are dressed flat—lie close to the body of the fly, extend just to the bend of the hook, and usually they are not spread or flared out from the body, and are set with their concave surfaces together. Or a single-feather wing, as that from a mallard's breast, may be used with the concave surface looking toward the back of the hook. A fly can be made with wings flat but spread, and in this style used either wet or as a floater (see illustration of Spent Gnat and spinner artificials).

A wet fly may sometimes be put together by tying body and hackle before setting the wings, and by making reversed or turned-back wings. Thus you would start it as shown in Fig. 1, catching in the tail and body material.

Then you lay the butt end of your feather (or feathers) to serve for wings, on the back of the hook, turn back—to lie alongside the quill—the lower part of web, and wind over all this

ANGLER'S FLIES AND HOW TO TIE

(which thus makes body padding) first with thread (Fig. 2) and then with the body material. The feather would now lie with tip directed away from hook and with concave surface looking up. If two whole feathers, feather tips, or strips are used the concave surfaces may look up and a little out at this stage.



Fig. 1



Fig. 2

Next you start the hackle as illustrated by Fig. 3, perhaps catching it in by the tip.

In winding the hackle you will stroke the fibers back toward the bend of the hook after each turn, and you will remember that you

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wind away from you and that the brighter side of hackle must always face toward the head of the fly. Make the last turns, at the shoulders, more bushy than the rest; and after all the hackle is wound on hold it well back by the



Fig. 3

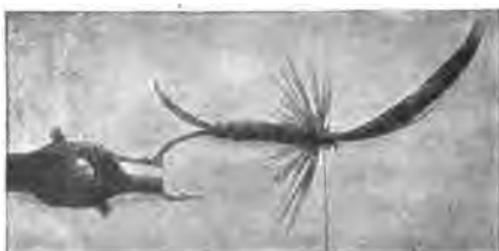


Fig. 4

ANGLER'S FLIES AND HOW TO TIE

paper retractor or by thumb and forefinger of left hand while you take a couple of turns of the thread or a half-hitch to keep it so. When the legs are completed your work will now look like Fig. 4.

It remains but to turn back your wing or wings into place, to hold the same there by a few half-hitches, and to apply the finishing touches (Fig. 5). If the wings are not thus reversed but are secured at once in their permanent position, you have a "straight-wing" fly.



Fig. 5

Supplementary

Notes.—Some bass and salmon flies especially are made with *compound wings*, auxiliary wings of a contrasting color and of about half the length of the main wings, being set outside them; these are called *wing shoulders*. When part of a wing is made of a front or upper strip (generally about one-third the width of the entire wing) of one color extending its full length, and the posterior or under part is of a contrasting feather, the first is denominated simply the wing, or else the upper-wing, and the latter is termed the under-wing. The reverse or under, lighter and more lustrous side

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of the feather is sometimes placed uppermost for wings; and, again, it may be advantageous before cutting the wing strips, to draw the web back in mass toward the butt of the feather so that its fibers stand at right angle to the quill. This is done to unlock and then re-lock in a new position the individual fibers of the web, which are hooked together at the edges. Wings are more securely fastened directly to the shank of the hook rather than tied over turns of hackle quill or other body material. Long narrow bits of feather in the complex adornment of salmon flies are sometimes referred to as *tippets*; so are fly snells.

Hackles are variously started at either end of the fly, by securing them first either by the point or butt, and two hackles may be caught in and wound together; or one wound in one direction around the hook and the other in the opposite way. Some "strip" the hackle before tying, to make the fibers stand out at right angles to the quill; to do this, hold the feather by its tip between the thumb and forefinger of one hand, and pressing the quill firmly between the fingernails of the same fingers (or thumb and middle-finger) of the other hand, draw down to the root. Other good tiers, as already noted, press back the fibers as they wind, to set them and prevent them from being wound under subsequent turns. When starting a

ANGLER'S FLIES AND HOW TO TIE

hackle at the point, it certainly is helpful to strip back at least a few fibers near the tip end, thus isolating the tip fibers that you catch in;

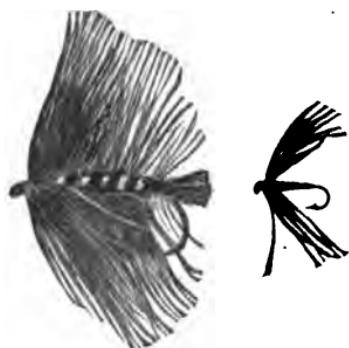


Different ways of starting hackles

you also will find the winding process much simplified if you first clean the butt-end of the quill of down and web so as to leave only as

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much of the fibers as you will make full use of. You will soon learn about how much will be required for any particular pattern of fly that you are tying—it takes only a few turns of the hackle to make sufficient legs for a dry fly—and when you have finished winding on the hackle it is much easier to have left only a bit of bare quill at the butt to trim off short.



A palmer fly, dressed very bushy,
and a spider fly

The *palmer style of hackle* is best fastened first by its tip at the tail-end of the body and is then wound spirally—generally over the body—toward the head. A second hackle is often used to make more compact shoulders—the *shoulder* being the part of the fly

just behind the head, where a shoulder belongs.

Some *accentuate the head* of the fly by making a little ball of herl—which generally is of black ostrich but may be green or brown—at the front-end of the body; and some put a couple of *turns of tinsel* at the tail-ends of all bodies, believing that this slight glitter enhances the lure without destroying its identity. To the

ANGLER'S FLIES AND HOW TO TIE

same end, Dr. Harry Gove puts a double band of silver and scarlet at the middle of the body; he is a great believer in iridescence and its positive effect upon the nervous excitability of a trout, which goads it into striking. (You may recall *Ælian*'s reference to the fish being "attracted and *maddened* by the color" of the artificial lure.) These procedures are logical enough because no matter what may be the color of their backs, the underbodies of natural flies generally are light and mostly of a silvery or golden sheen. (See Gay's reference to "his gaudy vest," in next chapter.)

Very *full bodies* may be padded with cotton. In *tying herl bodies*, strip some herl from your green peacock or from your ostrich feather, then catch two or three of them together and to the shank at their tips with your tying-thread; after thus bunching them they may be stroked between thumb and finger toward the butt, to make them more fluffy; and they may be twisted together a little before you begin winding all at once around shank of hook. When *making silk bodies*, untwist the two strands of floss, lay them together and wind smoothly and flat without twisting. Some materials for *hairy bodies*, as mohair or pig's wool, fur, or a piece of feather, are wound on by first either twisting them about the tying-silk, or spinning or interweaving them between its strands; this is

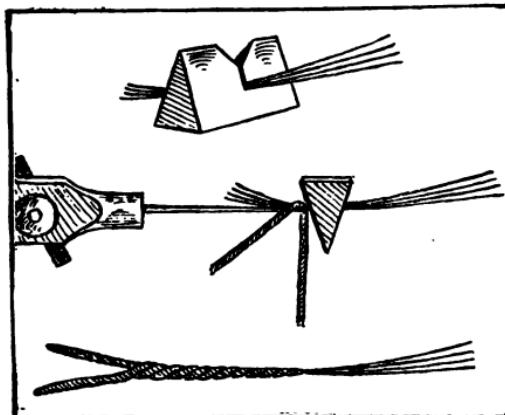
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called "dubbing;" fur, after cutting it loose from the skin, first is loosely felted by rubbing it between the palms of the hands. Use a *single strand of crewel wool for dry-fly bodies*, and do not wind too tightly or it will break; loose winding has also the advantage of allowing the woolly hairs to stand out more prominently, which helps buoyancy. The double wings, their parachute flare, and the hackle are the other main factors in flotation, the wings principally acting indirectly by causing the fly to land lightly on the water; to this we add oiling and false casts to keep the fly dry as possible.

To *make elongated, extended or detached bodies* after the method of McClelland, previously noted, cut with a sharp thin-edged razor thin sheets, about an inch by half an inch in size, from a chunk of crude (pure unvulcanized) rubber. Have the razor wet. Then cut these sheets into very fine strips. Moisten a strip in hot water, then with turpentine rub, roll, and pull it between the fingers until it is tacky. Draw it out to four or five times its original length when it is ready for winding. But you should previously have prepared a little wedge-shaped piece of cork, with a slit in the apex, into which you catch the selected tail-fibers; and have fastened a fine cambric needle—the finer the better—eye-end in your fly-vise, and have thrust the cork, with the fibers, down onto the

ANGLER'S FLIES AND HOW TO TIE

needle across its point, as illustrated. Now wind the rubber around fibers and needle, beginning close up against the cork, working toward the vise, and winding tightly at first in order to make the body to *taper toward the tail*



Steps in making McClelland detached body

and to grip the tail fibers securely. Continue toward butt of needle, lessening tension, till you have a body about three-quarters to seven-eighths of an inch long, with two slender legs at the butt—what remains unwound of the rubber strip. (This is attached to the hook shank by winding one leg about the other and the shank.) Remove the cork and push body off the needle with fingernails. The rubber will adhere together solidly and will not unwind.

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A number of these bodies may be made up and stored for use as wanted.

(This whole procedure—as that of the paper retractor, the pike-scale and the shad-scale wings, and the clothespin thread-holder—serves admirably as a specimen illustration of the individual “tricks-of-the-trade” that expert workers develop.)

Mr. Keene likewise made use of the needle in fabricating flexible detached bodies, laying a double strip of thin sheet rubber (dentists’ rubber dam) lengthwise about it—looped around the point—then adding the tail whisks, and a strip of wing-feather also directed away from the point, then doubling back the feather, folding it smoothly over the rubber, and winding over it the tying-silk of the color desired for ribbing.

Another way to make an elongated body is over a piece of silkworm-gut. It may or may not be completely detached during construction. You may also use boars’ bristles, to be had of any dealer in shoemakers’ supplies; and you may use this or the gut either single or double. Take a piece of gut, about three-quarters or seven-eighths of an inch long, with a knot tightly tied close to one end, which catches the tail. Place it on back of hook with the knot pointing in the direction of the bend. Wind half-way along shank and over the gut, with thread, to secure it. Carry thread back

ANGLER'S FLIES AND HOW TO TIE

toward head and fasten in a piece of dark brown silk-floss, as we will suppose you are tying a March Brown, one of the most popular patterns and one that some anglers prefer tied with an extended body, as it is a drake. Carry thread back and wind floss over it and the shank to point where gut leaves the hook, then continue winding floss on up the gut toward the knot, which cover in. Cut off surplus floss. To make the *underside of body lighter in color*, split now a strip of yellow floss or raffia to cover it smoothly and evenly, and bind spirally with thread carried up to head of fly. Cut off surplus yellow floss and fasten the thread. (In the discussion of "Trout Lures" we already have referred to the simpler practise of making the whole body to correspond with the lighter color of the underbody and sides of the natural fly, and ignoring the color of the back, as, especially in dry-fly fishing, these are the only parts of the body that the fish sees.)

For *flexibility*, detached bodies of gut occasionally are made with the end of a looped piece serving as a hinge by which it is attached at the junction with the hook shank.

We illustrate some flies tied by Dr. Harry Gove of New Brunswick, who is partial both to elongated bodies and to having them attached to upturned-shank hooks. He says such flies are both of more natural shape and that they

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cock better. Compare these with the following illustrations of creations of H. B. Christian's. The reader will have no difficulty in appreciat-



Specimens of Dr. Gove's handiwork

ing that both exhibits are the work of consummate artists.

Now that you have made up a goodly supply



Dry flies, cocked, on the water. (Tied by H. B. Christian.)

ANGLER'S FLIES AND HOW TO TIE

of flies see to it that you keep their *hooks sharpened*. Test the points before using the flies a second time, and if dulled they should be filed with a fine file, on the inside and at the sides of the point only; don't touch the outside. And when in use, inspect your cast frequently to make sure that the point of the hook has not *broken off*, as it really is too much to expect that a pointless hook will catch a fish. This breakage of points is caused chiefly by the hooks catching on stones in the back-cast.

Description of Trout-Fly Patterns

SANCTUARY

It seems to me I'd like to go
Where bells don't ring, nor whistles blow,
Or clocks don't strike, or gongs don't sound,
And I'd have stillness all around.

Not real stillness, but just the trees'
Low whispering, or the hum of bees,
Or brooks' faint babbling over stones
In strangely, softly tangled tones;

Or maybe the cricket or katydid,
Or the songs of birds in the hedges hid;
Or just some such sweet sounds as these
To fill a tired heart with ease.

EUGENE FIELD

From "Poems of Eugene Field," by kind permission of

Charles Scribner Sons

**REPRESENTATIVE COMMERCIAL TROUT, BASS, AND SALMON
FLY PATTERNS**

*These beautifully-colored plates of Typical Artificial Flies
for Trout, Bass, and Salmon angling are presented here through
the courtesy of William Mills and Son, New York City*

PLATE A

WM. MILLS & SON

EXTRA QUALITY TROUT FLIES ON O'SHAUGHNESSY HOOKS No. 10



ALDER



ALEXANDRA



BEAVERKILL



BARRINGTON



BEE



BLACK GNAT



BLACK PRINCE



BLACK PALMER



BROWN PALMER



CAHILL



CANADA



CINNAMON



COACHMAN



DOWDUNG



CRITCHLEY



DR. BRECK



GOLDEN MONKEY



GRAY PALMER



GOVERNOR



HAWTHORNE



GREEN WINKLE



GRIZZLY KING



JENNY LIND



JUNGLE COCK



KATY-DID



KING OF WATERS



LADY BEAVERKILL



LOWERY



MARCH BROWN



McGINTY

PLATE 8

WM. MILLS. & SON

EXTRA QUALITY TROUT FLIES ON O'SHAUGHNESSY HOOKS No. 10



MONTREAL



ORANGE MILLER



PARMACHENE BELLE



QUEEN



R. WOOD



RED PALMER



SHOEMAKER



VAN PATTEN



WICKHAM'S FANCY

WHITE MILLER

WIDOW

YELLOW PROFESSOR

ZULU

SHOWS SIZE ON O'SHAUGHNESSY HOOKS No. 12



DARK COACHMAN

HACKSTAFF HACKLE

SWIFTWATER

YELLOW MAY

YELLOW SALLY

SHOWS SIZE ON O'SHAUGHNESSY HOOKS No. 8



BABCOCK

NEW PAGE

BROWN PALMER RED TAIL

VII

Description of Trout-Fly Patterns



COMPLETE tabulation of what might be called the "leading" trout and bass flies of this country and of Europe—and ignoring the salmon flies—would comprise from four to five hundred varieties. We will conclude this treatise with a list of about seventy-five of the artificial trout-flies that today are most widely used and most generally successful in American waters, and with a description of their accepted patterns. It is a good plan to obtain at the beginning high-grade samples to serve as models for the reproduction of the exact colorations; later you will be getting your color indications mainly from the real insects. Attend now to what the English poet John Gay so charmingly says about this:

Mark well the various seasons of the year,
How the succeeding insect race appear,
In their revolving moon one color reigns,
Which in the next the fickle trout disdains;

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Oft have I seen a skillful angler try
The various colors of the treacherous fly;
When he with fruitless pain hath skim'd the brook,
And the coy fish rejects the skipping hook.
He shakes the bow that on the margin grows,
Which o'er the stream a weaving forest throws;
When if an insect fall (his certain guide)
He gently takes him from the whirling tide;
Examines well his form with curious eyes,
His gaudy vest, his wings, his horns, his size.
Then round the hook the chosen fur he winds,
And on the back a speckled feather binds;
So just the colors shine through every part,
That nature seems to live again in art.

It will be seen after looking over the list below that Dr. Gove is about right in stating that these *eighteen shades are most characteristic of trout insect food*, and that you will note that most of them are subdued and not decided colors: dark red, ginger-dun, claret, yellow, gray, orange, black, olive, purple, red-brown, amber-red, green-brown, lead color, yellow-dun, mulberry, white, yellow-green, and blue. You also may note that the above shades may be well represented in comparatively but few sterl^{ing} fly patterns, as in Black Gnat, Brown and Gray Hackles, Beaverkill, Cahill, Coachman, Cow-dung, the duns including Whirling Dun and Hare's Ear, Queen and King of the Water, the drakes including March Brown, Bluebottle, Montreal, Red Spinner.

PLATE G

WM. MILLS & SON

SPECIAL LIGHT STREAM TROUT FLIES ON THIN GUT AND SNECK HOOKS No. 12



GRAY MARLOW



BLACK GNAT



RED ANT



GOLDEN DUN MIDGE



RED TAG

SHOWS SIZE OF FLY ON SNECK HOOKS No. 10



Q. R. HARE'S EAR



OAK



MARCH BROWN



MERSHON



TURKEY BROWN



GOOD EVENING



GINGER MARCH BROWN



RONALD'S ALDER



GOVERNOR



WICKHAM'S FANCY



EMERALD



BLUE BOTTLE



COACHMAN



GROUSE SPIDER



BONNIE VIEW

SHOWS SIZE OF FLY ON SNECK HOOKS No. 8



MARLOW BUZZ



QUEEN



GRANNO



FLIGHTS FANCY



WHIRLING DUN

SHOWS SIZE OF FLY ON SNECK HOOKS, LONG SHANK, No. 8



BEAVERKILL



PROFESSOR



ROYAL COACHMAN



MILLS No. 1

PLATE J

WM. MILLS & SON

CELEBRATED DRY OR FLOATING FLIES ON HOOKS No. 12 (NEW No. 3)



BLACK GNAT



BLUE QUILL



BEAVERKILL



CAHILL



COACHMAN



COWDUNG



FLIGHTS FANCY



GOVERNOR



GRANNOM



HARE'S EAR



IRON BLUE DUN



JENNY SPINNER



LITTLE YELLOW MAY



MARCH BROWN



MOLE



RED TAG



RED QUILL



SILVER SEDGE



WICKHAM'S FANCY



YELLOW BELLY



IRON BLUE QUILL



PINK LADY



PALE EVE. DUN



WHIRLING DUN



ROYAL COACHMAN

SHOWS SIZE ON HOOK No. 10 (NEW No. 5)



APPLE GREEN



BROWN SEDGE



GOLD-RIBBED HARE'S EAR



QUILL CAHILL

DESCRIPTION TROUT-FLY PATTERNS

THE BEST TROUT FLIES

(NOTE.—"Brown" *hackle* means a chestnut; "red" *hackle* means a foxy red and not scarlet. The finely-mottled or -barred feathers from the breast of the mallard, wood duck, teal, widgeon, and pintail, which are much used for wings, are very similar and practically interchangeable. A stubbed tail accessory, whether of feather fiber or other material, is termed a "tag.")

ABBEY:

Wings, gray mottled (widgeon);
Body, red ribbed with gold tinsel; Legs, brown hackle;
Tail, orange and black barred (golden-pheasant hackle or breast).

ALDER:

Wings, dark brown mottled (turkey);
Body (corpulent or moth), green (peacock) herl;
Legs, black hackle.

BEE (various patterns):

Wings, brown tipped with black (end of brown turkey tail-feather) *or* black;
Body, alternate rings of black (ostrich) herl and yellow;
Legs, brown hackle *or* yellow.

Or

Wings, same; Body, brown herl ribbed with gold tinsel;
Legs, black hackle.

Or

Wings, gray mottled;
Body, yellow and black chenille in alternate rings;
Legs, red hackle.

Or

Wings, blue heron; Body, same as above;
Legs, brown hackle.

Or

Wings, dark brown;
Body, yellow ribbed with green (peacock) herl.
Legs, brown hackle.

BEAVERKILL:

Wings, lead (blue heron or slate-colored feather of duck or pigeon); Body, white silk;

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Legs, brown hackle wound entire length of body;
Tail, gray mottled (mallard).

FEMALE (OR LADY) BEAVERKILL:

Wings, same as above;
Body, gray tipped with yellow ball to represent egg-sac;
Legs, brown hackle; Tail, gray mottled (mallard).

BLACK ANT:

Wings, slate (duck or pigeon) or black;
Body, black silk with ball of black herl at head;
Legs, black hackle.

RED ANT (two patterns):

Wings, gray;
Body, front half red silk, posterior half brown herl;
Legs, red hackle.
Or with
Body, red with green (peacock) herl tip;
Legs, brown hackle.

BLACK GNAT (HACKLE, SPIDER):

Wings, lead, black, or brown; Body, black ostrich;
Legs, none except when tied on larger than number 10
hooks, when the pattern is called *Black Hackle*, and is
sometimes dressed palmer; dressed wingless and with
very long black hackle, it is called *Black Spider*.
(A very taking tiny pattern of the Black Gnat is tied with
pike-scale wings laid flat on the hook.)

BLUEBOTTLE (diversified):

Wings, black or gray;
Body, dark blue chenille ribbed with black silk or gold
tinsel, or of steel blue silk with white tip;
Legs, black or dark gray hackle.

BROWN DRAKE (see March Brown):

Wings, golden yellow-brown; Body and Legs, same;
Tail, dark brown (long).



MONTREAL YELLOW



NEW PAGE



TOOTLE BUG



MILLS No. 1



MONTREAL



SCARLET BUTCHER



WESTERN BEE



WHITE MOTH



WICKHAM'S FANCY



KITSON



TOMAH JOE



MOISIE GRUB



MONTREAL WHITE TIP



SCARLET IBIS



JOCK-SCOTT

PLATE N

WM MILLS & SON

HIGHEST QUALITY SALMON FLIES ON DOUBLE HOOKS No. 8



PRESIDENT



BLACK DOSE



FAIRY



BROWN FAIRY

SHOWS SIZE OF FLY ON DOUBLE HOOKS No. 6



NIGGER



PEASANT MILLER



WILKINSON



CAUSAPSCAL



BLUE HIGHLANDER



MITCHELL



YELLOW BARONET

SHOWS SIZE OF FLY ON DOUBLE HOOKS No. 4



FIERY BROWN



NEPISSEGUIT

BUTCHER



GREEN GROUSE



SILVER DOCTOR

THUNDER AND LIGHTNING

DESCRIPTION TROUT-FLY PATTERNS

GRAY DRAKE (three patterns):

Wings, gray mottled (mallard);
Body, white ribbed with black; Legs, gray hackle;
Tail, gray mottled *or* black hackle *or* none.

Or

Wings, brown; Body, dark gray;
Legs, gray mottled hackle; Tail, brown.

Or

Wings, purple mottled;
Body, white ribbed with silver tinsel and tipped with
green (peacock) herl;
Legs, purple mottled hackle; Tail, gray.

GREEN DRAKE (diversified—see May-fly):

Wings, yellow-green mottled;
Body, white ribbed with black *or* blue silk;
Legs, yellow-green *or* brown hackle; Tail, gray mottled.

Or

Wings, brown mottled; Body, white ribbed with blue;
Legs, brown hackle; Tail, gray mottled.

Or with

Body, white and brown mottled with posterior half ribbed
with black, green, *or* yellow; and Tail, dark brown.

BROWN HEN (GOVERNOR):

Wings, dark brown mottled (turkey);
Body, green (peacock) herl tipped with short red silk tag;
Legs, brown hackle; without the wings this pattern is
called *Red Tag*.

BROWN (RED) HACKLE (or PALMER—seven patterns):

Body, brown (ostrich) *or* green (peacock) herl;
Legs, brown hackle; with the hackle wound whole length
of body, this pattern is called *Brown Palmer*.

With the

Body (corpulent), green herl ribbed with gold tinsel;
Legs, brown hackle with black root, tied very bushy; the

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pattern is called *Marlow Buzz* or *Cochy Bondu* (*Coch-y-bon-dhu*, *Cock-d-bonddhu*, or *Cock-y-bondhu*—you can take your choice).

With the

Body, red silk or red ribbed with gold tinsel;
Legs, brown hackle wound whole length of body; this
called *Brown and Red, or Soldier Palmer*.
(Most hackle- and palmer-flies have the body corpulent.)

GINGER PALMER (diversified):

Body, yellow silk sometimes ribbed with silver tinsel or
of ginger-brown;
Legs, pale ginger hackle wound whole length of body.

GINGER QUILL:

Wings, gray or transparent;
Body, quill (from herl of peacock eye-feather);
Legs and Tail, ginger hackle.
(Quill-flies are named after the color of the hackle.)

GRAY HACKLE (or PALMER, ASHIES—twelve patterns):

Body, brown, black or green herl, or gray (*Gray-Bodied Ashy*), red (*Red-Bodied Ashy*), or yellow;
Legs, always gray hackle; with hackle wound whole length
of body, called *Gray Palmer*. With green silk body,
the palmer-dressed fly is called *Gray and Green Palmer*.

CADDIS-FLY (diversified—sometimes described as Stone-fly):

Wings, gray; Body, green; Legs, yellow wound palmer.
Or

Wings, same;
Body, elongated brown ribbed with black silk;
Legs, brown hackle with black root.

Or

Wings, light heron; Body, olive mohair picked out at
shoulder for Legs; Tail, brown mallard.

CAHILL:

Wings, gray mottled (wood-duck breast);
Body, mouse-colored mohair; Legs, brown hackle;
Tail, gray mottled (wood-duck).

PLATE M

WM. MILLS & SON

HIGHEST QUALITY SALMON FLIES ON SINGLE HOOKS



DUSTY MILLER, HOOK 5/0 LONG



STEUART, HOOK 5/0



JOCK SCOTT, HOOK 3/0



SILVER GRAY, HOOK 14



CHILDEERS, HOOK 6

GHOST, HOOK 6

GREEN HIGHLANDER, HOOK 4

DURHAM RANGER, HOOK 2

PLATE D

WM. MILLS & SON

EXTRA QUALITY MAINE TROUT OR BASS FLIES ON O'SHAUGHNESSY HOOKS No. 2



PARMACHENE BELLE

SILVER DOCTOR



COLONEL FULLER



BELGRADE

SHOWS SIZE ON O'SHAUGHNESSY HOOKS No. 4



GRIZZLY KING



FERGUSON



PARMACHENE BEAU



HOWELL



LORD BALTIMORE



SETH GREEN

DESCRIPTION TROUT-FLY PATTERNS

CINNAMON (FETID BROWN):

Wings, speckled brown hen; Body, cinnamon brown wool;
Legs, brown hackle; Tail, black hackle.

COACHMAN:

Wings, white (swan, wing of duck or goose);
Body (rather corpulent), bronze green (peacock) herl;
Legs, brown hackle.

LEAD-WINGED (DARK) COACHMAN:

Wings, lead color (heron); Body and Legs, as above.

ROYAL COACHMAN:

Same as Coachman except that the green herl Body has a
red silk band at the middle.

COWDUNG (diversified):

Wings, yellow brown (clay) *or* mouse gray (duck or crane
wing);
Body, yellow-brown *or* yellow-green; Legs, brown hackle.

Nothing is more hopelessly confusing than *the dun series*, and nothing will better illustrate the lack of scientific accuracy in the classification of angling flies, to which we already have alluded. The Iron Blue Dun, Pale Blue Dun, and Evening Dun artificials have been listed as one and the same. Yet David Foster classed the natural duns in two distinct species. (The *August Dun or Brown* is not a dun at all but a drake, and is one of the large-brown range, progeny of the Great Red-Spinner.) The *Blue Dun* is a phase of the Olive Dun (which is a smaller insect than the browns). Other phases of the same species, indicating more or less definite color gradations whether due to changes

STREAMCRAFT

in temperature or whatever cause, are the Yellow, Pale Blue, Pale Evening, Golden, and Hare's Ear Duns, etc., all progeny of the common Red Spinner. The *Iron Blue Duns* are a species distinct from the foregoing, *only little more than half their size*, and their source is the Jennie (Jinney) Spinner. From all of which it easily is seen that the reader may not expect to attain a too clear idea of the subtle differentiations in these naturals or in the patterns of their artificials.—Nor is it necessary that he should; though it may be well that he should know why he can't!



Relative sizes of natural flies: Large brown (drake), olive dun, and iron blue dun. (After David Foster)

AUGUST DUN (three patterns):

Wings, brown (hen wing);

Body, brown silk made fuzzy with English grouse-feather winding, and ribbed with yellow silk;

Legs, red hackle; Tail, rabbit whiskers.

Or

Wings, clay; Body, brown ribbed with yellow silk;

Legs, brown hackle; Tail, gray hackle.

DESCRIPTION TROUT-FLY PATTERNS

Or

Wings, brown and black mottled;
Body, brown ribbed with gold tinsel;
Legs and Tail, brown hackle.

AUTUMN DUN:

Wings, gray streaked with black;
Body, black ribbed with yellow silk;
Legs, gray hackle; Tail, black hackle.

BLUE DUN (diversified):

Wings, blue-gray *or* ash gray; Body blue-gray;
Legs, gray hackle; Tail, gray *or* black hackle.

Or

Wings, gray-blue; Body, white ribbed with gray-blue;
Legs, gray-blue hackle.

IRON BLUE DUN (diversified):

Wings, dark gray-blue (starling sometimes used);
Body, mouse-colored mohair, sometimes ribbed with yellow
silk;
Legs and Tail, gray-blue *or* brown hackle.

Or

Wings, gray *or* black; Body and Legs, gray;
Tail, gray *or* black.

Or

Wings, pale lead; Body, mauve-colored mohair;
Legs, gray hackle; Tail, gray.

PALE BLUE DUN:

Wings, blue-gray;
Body, blue-gray ribbed with yellow silk;
Legs, blue-gray (sometimes picked out from mohair body);
Tail, blue-gray.

PALE EVENING (WATERY) DUN (diversified):

Wings, light gray-blue;
Body, plain yellow *or* ribbed with brown;
Legs and Tail, light gray-blue.

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Or

Wings, gray; Body, yellow ribbed with silver tinsel;
Legs, yellow; Tail, gray and black mottled.

GOLDEN DUN:

Wings, gray; Body, yellow *or* olive ribbed with gold tinsel;
Legs, ash hackle.

GREAT DUN (diversified):

Wings, dark gray (transparent) *or* black;
Body, purple-brown (maroon);
Legs, gray, gray-black *or* black hackle;
Tail, dark brown barred with gray.

HARE'S EAR (DUN—diversified):

Wings, gray or blue-gray;
Body, fur from hare *or* blue-gray mohair;
Legs, blue-gray (mohair body picked out);
Tail, black hackle *or* none.

Or

Wings, gray; Body, blue ribbed with gray;
Legs, white hackle; Tail, gray hackle.

Or

Wings, dark brown; Body, brown fur; Legs, brown hackle.

Or

Wings, gray; Body, very dark red ribbed with gold tinsel;
Legs, black hackle; Tail, brown hackle; this pattern called
Gold-Ribbed Hare's Ear, as also a pattern having a
gray body ribbed with yellow silk.

OLIVE DUN:

Wings, blue-gray; Body, olive ribbed with yellow silk;
Legs, yellow-green hackle.

OLIVE GNAT (diversified):

Wings, dark gray; Body, olive green; Legs, brown *or*
ginger *or* black hackle; Tail, same as legs *or* none.

PRIME GNAT (MARSTON'S FANCY):

Wings, dark gray; Body, brown fur; Legs, brown hackle.

DESCRIPTION TROUT-FLY PATTERNS

ORANGE DUN (two patterns):

Wings, light brown; Body, orange;

Legs, brown palmer hackle.

Or with

Wings, blue-gray; and Legs of red hackle.

WHIRLING DUN (diversified):

Wings, light brown; Body, blue-gray ribbed with yellow silk *or* mixed ginger and yellow;

Legs and Tail, ginger hackle;

With

Wings, drab; Body, green-gray; Legs and Tail, red hackle; this pattern called *Dark Whirling Dun*.

With

Wings and Body, light gray; Legs, red hackle;

Tail, brown hackle; this called *Light Whirling Dun*.

YELLOW DUN (diversified):

Wings, blue-gray; Body, yellow *or* blue and yellow mixed and ribbed with yellow silk;

Legs, yellow hackle; Tail, barred black and white *or* none.

YELLOW MAY DUN:

Wings, pale yellow-green mottled;

Body, gray ribbed with yellow silk; Legs, yellow hackle.

YELLOW MAY (MAY-FLY—diversified):

(May-flies are made in both winged and hackled patterns, this latter with hackle very long. One of the most popular English patterns has the body made of straw and the hackle of summer-duck—wood-duck. The best winged patterns have wings of stained mallard feather. Mr. Dewar prefers the smaller- and the darker-winged pattern to the larger- and lighter-winged. See also *Green Drake* patterns listed.)

Wings, yellow; Body, Legs, and Tail, brown.

Or

Wings, described as pale yellow mottled with brown, or

STREAMCRAFT

greenish-yellow mottled (gray mallard feather stained bright yellow); Body, yellow ribbed with gold tinsel. Legs and Tail, yellow *or* mottled yellow hackle.
(Black hackle occasionally used for tail.)

FLIGHT'S FANCY:

Wings, dark gray; Body, yellow ribbed with gold tinsel;
Legs, brown hackle; Tail, gray hackle.

GOLDEN SPINNER (diversified):

Wings, bright gray (transparent);
Body, orange ribbed with gold tinsel; Legs, pale red hackle.
Or

Wings, dark gray (transparent); Body, same as above;
Legs, brown hackle; Tail, gray mottled *or* none.

JENNIE (JINNEY) SPINNER (diversified):

Body, milk white with bright red tip; Legs, white hackle.
Or

Body, white silk tipped at both head and tail with red-brown;

Legs, light ash hackle.

(If made with Wings, they should be bluish-white or pale lead, and transparent.)

RED SPINNER (diversified):

Wings, gray or transparent; Body, bright claret ribbed with gold tinsel; Legs and Tail, brick *or* gray hackle.

Or with

Body, red; Legs and Tail, brown hackle.

GRANNOM (diversified):

Wings, brown and black mottled (turkey);
Body, brown with a green tip (and sometimes tag also);
Legs, brown hackle.

Or

Wings, pale gray turkey; Body, gray mohair picked out at shoulder for Legs, and with green silk tag.

DESCRIPTION TROUT-FLY PATTERNS

Or

Wings, brown; Body, green (grass) ribbed with black;
Legs, black hackle.

GRIZZLY KING:

Wings, gray mottled (mallard)—*bass fly* may have red shoulders;

Body, green ribbed with gold tinsel; Legs, gray furnace hackle (black center and edge, gray between); Tail, red.

HAWTHORNE (two patterns):

Wings, gray or transparent;

Body, black (ostrich) herl; Legs, black hackle.

Or

Wings, black;

Body, black ribbed with gold or silver tinsel;

Legs and Tail, black hackle.

JENNIE LIND (diversified):

Wings, lavender; Body, yellow ribbed with gold tinsel;

Legs, scarlet; Tail, lavender.

Or with

Wings and Tail, light blue.

KATYDID:

Wings, dark green;

Body, light green ribbed with gold tinsel;

Legs, green hackle; Tail, brown hackle.

(Sometimes tied with wings lighter than body.)

MARCH BROWN (two patterns):

Wings, brown mottled (partridge or Scotch grouse);

Body, dark brown ribbed with yellow silk;

Legs and Tail, brown mottled.

With

Wings, clay; Body, gray; Legs and Tail, gray mottled;
this pattern called *Light March Brown*.

(Some tiers distinguish between the male and the

STREAMCRAFT

female, in the first pattern, by omitting the ribbing on the bodies of some of the flies. In all patterns the tail-stylets should be extra long.)

TURKEY BROWN (diversified):

Wings, light brown mottled; Body, dark brown ribbed with purple silk; Legs and Tail, dark brown hackle.

Or

Wings, dark brown mottled; Body, scarlet; Legs, red hackle; Tail, brown hackle.

MOLE:

Wings, light yellow-brown with dark mottling (in this *dry fly* they are set with tips pointing in an exaggerated forward position);

Body, dark brown; Legs, dark brown palmer hackle; Tail, dark brown hackle.

MONTRÉAL (diversified):

Wings, brown and black mottled (turkey tail-feather);

Body, maroon *or* dark claret mohair ribbed with gold;

Legs, dark claret *or* crimson hackle;

Tail, scarlet ibis *or* gray mottled (mallard); this is called *Dark Montreal*.

With

Wings, gray mottled (mallard);

Body, scarlet silk ribbed with gold tinsel;

Legs, claret hackle;

Tail, scarlet ibis *or* gray mallard; this pattern is called *Light Montreal*.

DUSTY MILLER:

Wings, dirty gray (turkey); Body, dark gray mohair sometimes ribbed with narrow gold tinsel;

Legs, gray hackle;

Tail, gray (turkey or mallard).

WHITE MILLER:

Wings, white (duck wing); Body, white sometimes ribbed with silver tinsel; Legs, white hackle.

DESCRIPTION TROUT-FLY PATTERNS

NEVERINK:

Wings, gray and black mottled; Body, light yellow;
Legs, yellow hackle; Tail, black hackle.

OAK:

Wings, brown mottled (turkey or quail);
Body, orange ribbed with black silk; Legs, brown hackle.

PARMACHENE BELLE:

Wings, white with scarlet outside strip;
Body, yellow silk or mohair ribbed with silver tinsel and
with or without ball of peacock herl at head and tip;
Legs, scarlet hackle; Tail, white and scarlet strips.

PROFESSOR:

Wings, gray mottled (mallard);
Body, yellow ribbed with gold tinsel;
Legs, brown hackle; Tail, scarlet ibis.

QUAKER:

Wings, oriole wing-feather *or* gray;
Body, gray; Legs, honey yellow hackle.

QUEEN OF THE WATER:

Wings, gray mottled (mallard); Body, orange;
Legs, brown hackle wound the entire length of body.

KING OF THE WATER:

Same as Queen except that the Body is red, and the
hackle is not dressed palmer.

RED (SCARLET) IBIS:

Wings, scarlet ibis; Body, scarlet ribbed with gold tinsel;
Legs and Tail, scarlet ibis.

REUBEN WOOD:

Wings, gray mottled (wood-duck);
Body, white chenille with scarlet silk tip;
Legs, light brown hackle; Tail, gray mottled.

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SETH GREEN:

Wings, light brown mottled (turkey);
Body, green ribbed with gold tinsel;
Legs, brown hackle;
Tail, gray mottled (wood-duck) or none.

SAND-FLY:

Wings, light yellow-brown;
Body, orange; Legs, light ginger hackle.

SHAD-FLY (diversified):

Wings, brown mottled (turkey);
Body, peacock herl with brown tip or two bands of green
herl with gold band between;
Legs, red or brown with black root.

Female represented with
Body, orange ribbed with brown silk, and green ball at
tail to represent egg-sac; Legs, ginger hackle.

Louis Rhead's studies of this natural fly, and his report thereon in his *American Trout-Stream Insects*, are highly interesting. Says he: "The Shad-fly is the most abundant trout insect-food that appears on our Eastern and some Middle and Far Western streams. Trout are always ravenous for it, yet a true imitation of this handsome fly has hitherto never been made. Old residents of Roscoe, N. Y., say this typical aquatic insect has been known as the Shad-fly for seventy years at least, and it is so named because its flight occurs just at the time when shad arrive at the headwaters of the Delaware river to spawn; while so doing they feed upon this fly, thereby attaining a fat and sleek appearance after spawning time is over.

DESCRIPTION TROUT-FLY PATTERNS

"A second reason for the name is that the flight occurs exactly when the beautiful white woodland blossoms known as shad-blow shed their white petals, to be blown by the wind on the water's surface, lightly floating downstream.

"Thirdly, the name was given because the egg-sac attached to the body of the female is very much like shad-roe in shape and appearance, except in color.

"Of course the Shad-fly appears on rivers where no shad spawn or shadblow trees grow. It is very beautiful in shape and color, and the difference, especially in color, of male and female is greater than with any other insect I know.

"The male has two large and two small wings of silvery transparency tinged with warm yellow, that lap over the body, though they rise higher above the body than in the female. The tail, in seven segments, is a beautiful soft gray-green color, in striking contrast to the sienna-brown shoulders and long pliable legs. The head is small, with shining black eyes, between which grow two brown feelers or horns, moved forward or back at will.

"The more sedately colored female has four gray-brown mottled wings that lap down just over the tail. The shoulders are bronze-green above, turning to purplish-black on the belly, and the feet as well as the feelers, are brown.

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The black head and eyes of the female are somewhat larger than those of the male. The tail-end of body is dark brown, with a dull band of yellow ochre along the sides. At this end of the body, pushed in a sort of cavity, is the bright green egg-sac, which is easily removed. I have not yet been able to tell whether the Shad-fly deposits the egg-sac on the water's surface, where it frequently alights, or drops it while in flight; I incline to believe in the former.

"Large females measure half an inch from head to end of egg-sac, and three-quarters of an inch from head to tip of wings. Egg-sacs are about one-eighth of an inch long.

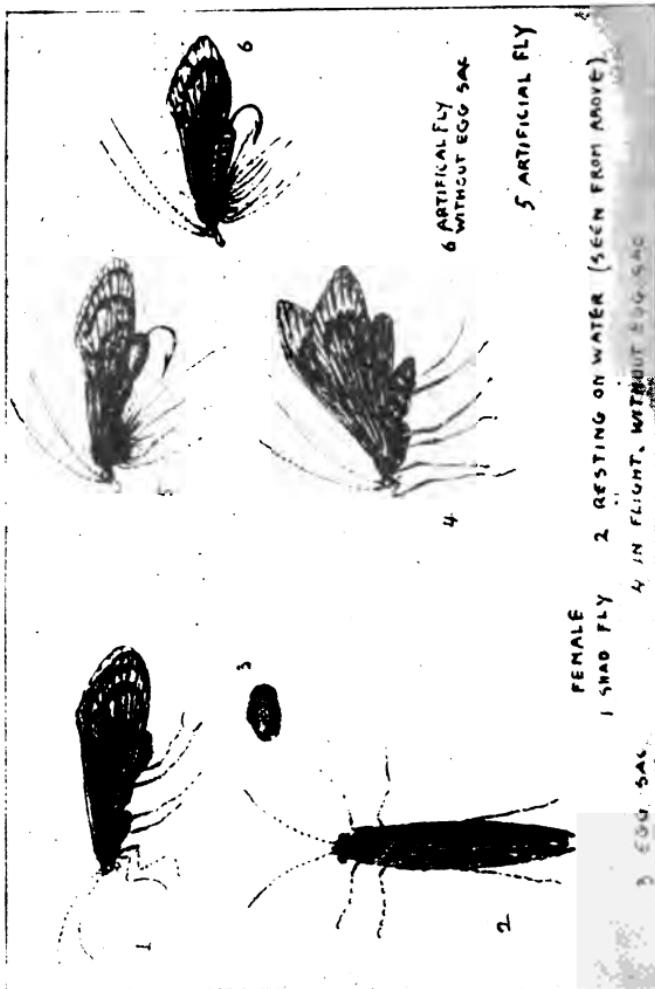
"This season I was most fortunate to witness a first hatch, which generally appears before the great or final hatch, when the vast clouds float over the river for a few hours like a severe snow-storm, reaching up both forks of the river (Beaverkill and Willowemoc rivers) to a distance of over twenty miles. Isolated specimens appear as early as April 20 and as late as the end of June or even later. The early part of May this season, up to the 19th, was cold and stormy, frost almost every night and vegetation was too weeks late. On the 11th and 12th the temperature suddenly changed to almost summer heat, which brought out a fair rise of Shad-fly. Then followed a sudden decline in temperature to bitter cold. We had been fish-

DESCRIPTION TROUT-FLY PATTERNS

ing from the 8th, and there were slight warm showers, and the rise began about noon, the insects flying high above the water. They are exceedingly strong and active in flight, making them difficult to capture with the fly-net. They fly twenty feet high when over the land. At rare intervals when they do take a rest, to alight on leaves and twigs at the water's edge, the movement is rapid when efforts are made to capture them. Yet in flight they appear to move slowly and quietly along. They are excellent floaters and can walk along the surface with ease.

"While most flies hide themselves behind large stones and under leaves for protection from the wind and rain on cold days, a remarkable feature of the Shad-fly is to gather in a great swarm on a rock by the riverside, something like a swarm of bees. If you brush them off in large clusters to the water's surface they spread out, floating down with the current, to attract a surprising number of trout and chub that rise up to make the water bubble in all directions in gorging on the unexpected feast.

"I can with confidence predict that when the artificial fly is tied exactly after my drawings of both male and female, that fly-fishers—both wet and dry—will find it to be superior to any other fly, even including the large Green and Gray Drakes, for the latter half of May and most of



Shad-fly (female)—the American May-fly
(From original drawings by Louis Rhead)



7 male shad-fly
8 artificial fly
9 resting on water (seen from above)
10 outspread wings
10 resting on water (seen from above)

Shad-fly (male)—the American May-fly
(From original drawings by Louis Rhead)

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the month of June. When the Shad-fly is on the water you never fail to see trout rising. When the great rise appears it is hardly possible to catch a trout with any prevailing artificial as now tied."

SEDGE (three patterns):

Wings, land-rail upper- and starling under-wing;

Body, light yellow; Legs, light red hackle.

With

Wings, dark brown; Body, dark green;

Legs, brown hackle; the pattern is called *Brown Sedge*.

With

Wings, light brown; Body, white ribbed with silver;

Legs, light brown palmer hackle; called *Silver Sedge*.

SHOEMAKER:

Wings, mottled gray of mallard and mottled woodcock mixed;

Body, ringed alternately with light and gray salmon (four or five rings of salmon and lead with salmon at tip);

Legs, dark ginger hackle; Tail, mottled woodcock.

SILVER DOCTOR (much diversified):

Wings, brown mottled (turkey) with barred black and white tip, and scarlet and yellow outer mid-strips, or strips of scarlet, yellow, blue, brown, gray, orange and black mottled;

Body, silver tinsel with yellow and scarlet tip;

Legs, light blue hackle or same with guinea-hen;

Tail, yellow and scarlet. (This is the greatest salmon fly.)

STONE (diversified):

Wings, light brown mottled; Body, dark green tipped with yellow-green; Legs and Tail, yellow-brown.

DESCRIPTION TROUT-FLY PATTERNS

With

Wings, yellow-brown mottled;
Body, dark brown ribbed with yellow;
Legs, yellow-brown hackle; Tail, gray mottled *or* none;
the pattern is called *Dark Stone*.

With

Wings, light brown; Body, brown mohair; Legs, dark
brown hackle; Tail, brown mallard; the pattern is
called *Light (Brown) Stone*.

WICKHAM'S FANCY:

Wings, dark gray; Body, gold tinsel;
Legs, red palmer hackle.

WILLOW (diversified):

Wings, light gray; Body, gray; Legs, black *or* ash hackle.
Or

Wings, light brown; Body, brown-yellow;
Legs, brown hackle.

Or with

Wings, same; Body, blue-gray; Legs, black hackle.
(Some Willow patterns very similar to some of the
duns.)

YELLOW SALLY:

Wings, light yellow;
Body, yellow ribbed with brown; Legs, light yellow hackle.

~~Over~~ Erratum! Add 2 numbers
to all the larger figures for
correct page

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Memoranda

(NOTE.—The author suggests the adoption of the following plan which has yielded him very practical results. Number serially the various patterns of flies listed in Chapter VII. Keep a model sample of each fly that you tie and preserve these mounted in a tin box with each indexed by its key number. Note below, by number, such of the patterns as have proven particularly successful and the location and conditions under which they were "taking." For example, a certain pattern of Yellow Dun dry fly was especially killing on a particular stream, with low water, in August.)

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MEMORANDA



Tis better
to have
fished
and lost
than never
to have
fished
at all

YB 10519

